THE

McGILL

University Calendar,

AND

EXAMINATION PAPERS,

1883-84.

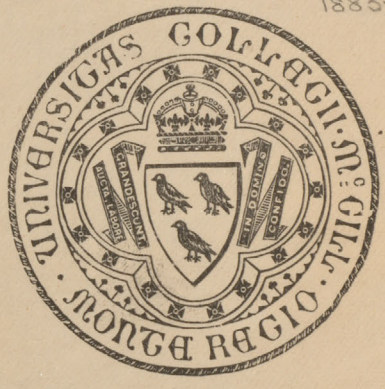
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General Statement.

SESSION OF 1883–84.

The Fifty-first Session of the University, being the Thirty-first under the amended Charter, will commence in the Autumn of 1883.

By Virtue of the Royal Charter, granted in 1821 and amended in 1852, the Governors, Principal and Fellows of McGill College constitute the Corporation of the University; and, under the Statutes framed by the Board of Governors, with approval of the Visitor, have the power of granting Degrees in all the Arts and Faculties, in McGill College, and Colleges affiliated thereto.

The Statutes and Regulations of the University have been framed on the most liberal principles, with the view of affording to all classes of persons the greatest possible facilities for the attainment of mental culture and professional training. In its religious character the University is Protestant, but not denominational; and while all possible attention will be given to the character and conduct of students, no interference with their peculiar religious views will be sanctioned.

The educational work of the University is carried on in McGill College, Montreal, and in the Affiliated Colleges and Schools.

I. McGILL COLLEGE.

THE FACULTY OF ARTS.—The complete course of study extends over four Sessions, of eight months each: and includes Classics and Mathematics, Experimental Physics, English Literature, Logic, Mental and Moral Science, Natural Science, and one Modern Language, or Hebrew; all which subjects are imperative in the first two years of the course; but in the third and fourth years options are allowed in favour of the Honour Courses in Classics, Mathematics, Mental and Moral Science, Natural Science, and English Literature. Certain exemptions are also allowed to professional Students. The course of study leads to the Degrees of B.A., M.A., and LL.D.

THE FACULTY OF APPLIED SCIENCE provides a thorough professional training, extending over three or four years, in Civil Engineering, Mechanical Engineering, Mining Engineering and Assaying, and Practical Chemistry, leading to the Degrees of Bachelor of Applied Science, Master of Engineering, and Master of Applied Science.

THE FACULTY OF MEDICINE.—The complete course of study in Medicine extends over four Sessions, of six months each, and leads to the Degree of M.D., C.M. There is also a Summer Course, which is optional.

THE FACULTY OF LAW.—The complete course in Law extends over three Sessions, of six months each, and leads to the degrees of B.C.L., and D.C.L.

McGill University Libraries

II. AFFILIATED COLLEGES.

Students of Affiliated Colleges are matriculated in the University, and may pursue their course of study wholly in the Affiliated College, or in part in McGill College, and may come up to the University Examinations on the same terms with the Students of McGill College.

MORRIN COLLEGE, *Quebec*—Is affiliated in so far as regards Degrees in Arts and Law.

[Detailed information may be obtained from Rev. John Cook, D.D., Principal.]

ST. FRANCIS COLLEGE, *Richmond*—Is affiliated in so far as regards the Intermediate Examinations in Arts.

[Detailed information may be obtained from the Principal, Richmond, P. Q.]

III. AFFILIATED THEOLOGICAL COLLEGES.

Affiliated Theological Colleges have the right of obtaining for the Students the advantage, in whole or in part, of the course of study in Arts, with such facilities in regard to exemptions as may be agreed on.

THE CONGREGATIONAL COLLEGE OF BRITISH NORTH AMERICA, *Montreal.*

THE PRESBYTERIAN COLLEGE OF MONTREAL, in connection with the Canada Presbyterian Church.

THE DIOCESAN COLLEGE OF MONTREAL.

THE WESLEYAN COLLEGE OF MONTREAL.

IV. AFFILIATED SCHOOLS.

THE MCGILL NORMAL SCHOOL provides the training requisite for Teachers of Elementary and Model Schools and Academies. Teachers trained in this School are entitled to Provincial Diplomas.

THE MODEL SCHOOLS OF THE MCGILL NORMAL SCHOOL are Elementary Schools, divided into a Boys' Department, Girls' Department, and Primary School.

COLLEGIATE INSTITUTES, ACADEMIES, and HIGH SCHOOLS may be affiliated in so far as regards Matriculation in Arts and Applied Science, under the University regulations. The following are at present so recognized :—

Prince of Wales College, Charlottetown P.E.I.; the Collegiate Institute, Hamilton, Ont.; the Canadian Literary Institute, Woodstock, Ont.; the High School, Montreal; the Bishop's College School, Lennoxville; the Girls' High School, Montreal; the Lachute Academy; the Dunham Academy; the Knowlton Academy; the Waterloo Academy.

Governing Body of the University.

VISITOR :

HIS EXCELLENCY THE RIGHT HON. THE MARQUIS OF LORNE, LL.D., K.T., P.C.,

GOVERNOR GENERAL OF CANADA, &c.

GOVERNORS :—

[*Being the Members of the Royal Institution for the advancement of Learning.*]

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JOHN H. R. MOLSON, ESQ.
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THE HON. SIR ALEXANDER T. GALT, K.C.M.G.
THE HON. SIR FRANCIS HINCKS, K.C.M.G., C.B.
JOHN MOLSON, ESQ.
JOSEPH HICKSON, ESQ.
THE HON. ROBERT MACKAY.
THE HON. JOHN J. C. ABBOTT, D.C.L., Q.C.
ROBERT A. RAMSAY, M.A., B.C.L.
WILLIAM C. McDONALD, ESQ.
HUGH McLENNAN, ESQ.
GEORGE HAGUE, ESQ.

(The Board of Governors has, under the Royal Charter, the power to frame Statutes, to make Appointments, and to administer the Finances of the University.)

PRINCIPAL :—

JOHN W. DAWSON, M.A., LL.D., F.R.S., C.M.G., *Vice-Chancellor.*

(The Principal has, under the Statutes, the general superintendence of all affairs of the College and University, under such regulations as may be in force.)

FELLOWS :—

VEN. ARCHDEACON LEACH, M.A., D.C.L., LL.D., Vice-Principal and Dean of the Faculty of Arts.
HENRY ASPINWALL HOWE, LL.D., Governors' Fellow.

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ALEXANDER JOHNSON, M.A., LL.D., Vice-Dean of the Faculty of Arts, Governors' Fellow.
Rev. GEORGE CORNISH, M.A., LL.D., Elective Fellow, Faculty of Arts.
Rev. HENRY WILKES, M.A., D.D., LL.D., Principal of the Congregational College of British North America.
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WILLIAM H. HICKS, Esq., Principal of McGill Normal School.
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Rev. J. CLARK MURRAY, LL.D., Elective Fellow, Faculty of Arts.
HENRY T. BOVEY, M.A., C.E., Dean of the Faculty of Applied Science.
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Rev. E. J. REXFORD, B.A., Representative Fellow in Arts.
ROBERT BELL, Grad. Civ. Eng., M.D., Representative Fellow in App. Science.
Rev. JOHN JENKINS, D.D., LL.D., Governors' Fellow.
Rev. CANON HENDERSON, M.A., Principal of the Montreal Diocesan Theological College.
Rev. GEORGE DOUGLAS, LL.D., Principal of the Montreal Wesleyan Theological College.
WILLIAM OSLER, M.D., Representative Fellow in Medicine.
CLEMENT H. McLEOD, Ma. E., Representative Fellow in Applied Science.
J. S. ARCHIBALD, M.A., B.C.L., Elective Fellow, Faculty of Law.
GEORGE ROSS, M.A., M.D., Elective Fellow, Faculty of Medicine.
FRANCIS J. SHEPHERD, M.D., Representative Fellow in Medicine.
JOHN S. HALL, B.A., B.C.L., Representative Fellow in Law.
Rev. R. W. NORMAN, M.A., D.C.L., Chairman of Protestant Board of School Commissioners,
R. P. HOWARD, M.D., Dean of Faculty of Medicine.

(The Governors, Principal, and Fellows constitute, under the Charter, the Corporation of the University, which has the power, under the Statutes, to frame regulations touching Courses of Study, Matriculation, Graduation and other Educational matters ; and to grant Degrees.)

SECRETARY, REGISTRAR AND BURSAR :—

[*And Secretary of the Royal Institution.*]

William Craig Baynes, B.A., Residence and Office, East Wing, McGill College ; Office hours 10 to 2.
James W. Brakenridge, B.C.L., Clerk ; Residence, 1472 St. Catherine street.

OFFICERS OF INSTRUCTION.

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Principal, Logan Professor of Geology and Professor of Natural History. — East Wing McGill College.

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Vice Principal, Dean of the Faculty of Arts and Emeritus Professor in the Faculty of Arts. — 16 University Street.

HENRY ASPINWALL HOWE, LL.D.
Emeritus Professor in the Faculty of Arts. — Outremont.

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Emeritus Professor in the Faculty of Medicine. — 84 St. Famille Street.

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HON. WILLIAM BADGLEY, D.C.L.
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Professor of German Language and Literature. — McGill College.

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Professor of Mathematics and Redpath Professor of Natural Philosophy, Vice-Dean of the Faculty of Arts. — 5 Prince of Wales Terrace.

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Professor of French Language and Literature. — 39 McGill College Av.

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EDWARD CARTER, Q.C., D.C.L.
Emeritus Professor in the Faculty of Law. — 416 St. Antoine Street.

G. E. FENWICK, M.D.
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JOSEPH M. DRAKE, M.D.
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N. W. TRENHOLME, M.A., B.C.L.
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Emeritus Professor in the Faculty of Law. — 8 Prince of Wales Terrace.

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Dean of the Faculty of Law, Professor of International Law. — 268 University Street.

GILBERT P. GIRDWOOD, M.D.
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David Y. Greenshields Professor of Chemistry and Mineralogy, and Lecturer in Assaying and Mining. — Wallbrae Pl., off 256 Uni. St.

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MATTHEW HUTCHINSON, B.C.L. *Associate Professor of Civil Procedure.*	Olivier Street, Cote St. Antoine.
J. EMERY ROBIDOUX, B.C.L. *Associate Professor of Real Estate Law.*	35 St. Hubert Street.
C. H. McLEOD, Ma.E. *Professor of Descriptive Geometry and Superintendent of Meteorological Observatory.*	Observatory McGill College.
LEONIDAS HEBER DAVIDSON, M.A., B.C.L. *Professor of Commercial Law.*	17 St. Luke Street, or 194 St. James.
FRANCIS J. SHEPHERD, M.D. *Professor of Anatomy.*	85 Mansfield Street.
FRANK BULLER, M.D. *Professor of Ophthalmology and Otology.*	694 Dorchester Street.
ARTHUR A. BROWNE, M.A., M.D. *Professor of Midwifery and Diseases of Children.*	1353 St. Catherine Street.
JAMES STEWART, M.D. *Professor of Materia Medica and Pharmacy.*	Medical Building, McGill College.
GEORGE WILKINS, M.D. *Professor of Medical Jurisprudence.*	167 St. Antoine Street.
G. H. CHANDLER, M.A. *Lecturer in Mathematics, Faculty of Applied Science.*	32 Lorne Avenue.
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RICHARD L. MACDONNELL, B.A., M.D. *Lecturer in Hygiene. and Demonstrator of Anatomy.*	1433 St. Catherine Street.
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D. P. PENHALLOW, B.Sc. *Lecturer in Botany.*	McGill College.
JOHN ANDREW. *Instructor in Elocution.*	64 Roy Street.
FREDERICK S. BARNJUM. *Instructor in Gymnastics.*	19 University Street.
GEORGE W. MAJOR, B.A., M.D. *Instructor in Laryngology.*	1395 St. Catherine Street.
ALEXANDER D. BLACKADER, B.A., M.D. *Instructor in Diseases of Children.*	44 Beaver Hall Terrace.
WILLIAM R. SUTHERLAND, M.D. *Curator of Medical Museum, and Asst. Dem. of Anatomy.*	1390 St. Catherine Street.
LIBRARY.	
M. WILLIAMS TAYLOR. *Assistant Librarian.*	Library, McGill College.

BENEFACTORS OF

McGill University, Montreal.

I. ORIGINAL ENDOWMENT, 1811.

THE HONORABLE JAMES McGILL, who was born at Glasgow, 6th Oct., 1744, and died at Montreal, 19th Dec., 1813, by his last will and testament, under date 8th January, 1811, devised the Estate of Burnside, situated near the City of Montreal, and containing forty-seven acres of land, with the Manor House and Buildings thereon erected, and also bequeathed the sum of ten thousand pounds in money, unto the "Royal Institution for the Advancement of Learning," a Corporation constituted in virtue of an Act of Parliament passed in the Forty-first Year of the Reign of His Majesty, King George the Third, to erect and establish a University or College for the purpose of Education and the advancement of learning in the Province of Lower Canada, with a competent number of Professors and Teachers to render such Establishment effectual and beneficial for the purposes intended; requiring that one of the Colleges to be comprised in the said University, should be named and perpetually be known and distinguished by the appellation of "McGill College."

The value of the above mentioned property was estimated at the date of the bequest at..... $120,000

II. UNIVERSITY BUILDINGS.

THE WILLIAM MOLSON HALL, being the west wing of the McGill College buildings, with the Museum Rooms, and the Chemical Laboratory and Class Rooms, was erected in 1861, through the munificent donation of the founder, whose name it bears.

THE PETER REDPATH MUSEUM, the gift of the donor whose name it bears, was announced by him as a donation to the University in 1880, and was formally opened to the public, August, 1882.

III. ENDOWED CHAIRS.

THE MOLSON CHAIR OF ENGLISH LANGUAGE AND LITERATURE, in 1856, by the Honorable John Molson, Thomas Molson, Esq., and William Molson, Esq., —$20,000.

THE PETER REDPATH CHAIR OF NATURAL PHILOSOPHY, in 1871, by Peter Redpath, Esq.,—$20,000.

THE LOGAN CHAIR OF GEOLOGY, in 1871, by Sir W. E. Logan, LL.D., F.R.S., and Hart Logan, Esq.,—$20,000.

THE JOHN FROTHINGHAM CHAIR OF MENTAL AND MORAL PHILOSOPHY, in 1873, by Miss Louisa Frothingham,—$20,000.

THE WILLIAM SCOTT CHAIR OF CIVIL ENGINEERING, endowed by the last will of the late Miss Barbara Scott, of Montreal, $30,000, amount not yet received, 1st May, 1883.

THE MAJOR HIRAM MILLS CHAIR OF CLASSICS, in 1882, endowed by the last will of the late Major Hiram Mills of Montreal,—$42,000.

THE DAVID J. GREENSHIELDS CHAIR OF CHEMISTRY AND MINERALOGY, in the Faculties of Arts and Applied Science, in 1883, endowed by the last will of the late David J. Greenshields, Esq., of Montreal,—$40,000.

THE GALE CHAIR, in the Faculty of Law, endowed by the late Mrs. Andrew Stuart (née Agnes Logan Gale) of Montreal, in memory of her father, the late Honourable Mr. Justice Gale,—$25,000; not yet received, May 1883.

IV. EXHIBITIONS AND SCHOLARSHIPS IN ARTS.

THE JANE REDPATH EXHIBITION, $100 annually—founded in 1868 by Mrs. Redpath of Terrace Bank, Montreal, and endowed with the sum of $1,667.

THE MCDONALD SCHOLARSHIPS AND EXHIBITIONS, 10 in number—founded in 1871 and endowed with the sum of $25,000, in 1882, by William C. McDonald, Esq.—Annual value, $1250.

THE CHARLES ALEXANDER SCHOLARSHIP, for Classics—founded in 1871, by Charles Alexander, Esq.—Annual value, $120.

THE TAYLOR SCHOLARSHIP—founded in 1871, by T. M. Taylor, Esq. Annual value, $100—terminated in 1878.

THE SCOTT EXHIBITION—founded by the Caledonian Society of Montreal in commemoration of the Centenary of Sir Walter Scott, and endowed in 1872 with the sum of $1,100 subscribed by members of the Society, and other citizens of Montreal. The Exhibition is given annually in the Faculty of Applied Science.

THE BARBARA SCOTT SCHOLARSHIP OF CLASSICAL LANGUAGES AND LITERATURE,—founded by the last will of the late Miss Barbara Scott of Montreal, in the sum of $2,000 :—amount not yet received, 1st May, 1883.

THE DAVID MORRICE SCHOLARSHIP—in the subject of Institutes of Medicine, in the Faculty of Medicine—founded in 1881—value $100.

THE GEORGE HAGUE EXHIBITION—founded in 1881 in the Faculty of Arts, for the term of four years, value $125.

THE BURLAND SCHOLARSHIP—founded 1829, J. H. BURLAND, ESQ. $100 for a Scholarship in Applied Science, for three years, being $300.

THE MAJOR HIRAM MILLS MEDAL AND SCHOLARSHIP, founded by the will of the late Major Hiram Mills of Montreal, and endowed with the sum of $1,500.

V. ENDOWMENTS OF MEDALS AND PRIZES.

In 1856 Henry Chapman, Esq., founded a gold medal, to be named the "Henry Chapman Gold Medal," to be given annually in the graduating class in Arts. This Medal was endowed by Mr. Chapman in 1874, with the sum of $700.

In 1860 the sum of £200, presented to the College by H. R. H. the Prince of Wales, was applied to the foundation of a Gold Medal, to be called the "Prince of Wales Gold Medal," which is given in the graduating class for Honour Studies in Mental and Moral Philosophy.

In 1864 the "Anne Molson Gold Medal" was founded and endowed by Mrs. John Molson of Belmont Hall, Montreal, for an Honour Course in Mathematics and Physical Science.

In the same year the "Shakespeare Gold Medal," for an Honour Course to comprise and include the works of Shakespeare and the Literature of England from his time to the time of Addison, both inclusive, and such other accessory subjects as the Corporation may from time to time appoint—was founded and endowed by citizens of Montreal, on occasion of the three hundreth anniversary of the birth of Shakespeare.

In the same year the "Logan Gold Medal," for an Honour Course in Geology and Natural Science, was founded and endowed by Sir William Edmond Logan, LL.D., F.R.S., F.G.S., &c.

In 1865 the "Elizabeth Torrance Gold Medal" was founded and endowed by John Torrance, Esq., of St. Antoine Hall, Montreal, in memory of the late Mrs. John Torrance, for the best student in the graduating class in Law, and more especially for the highest proficiency in Roman Law.

In the same year, the "Holmes Gold Medal" was founded by the Medical Faculty, as a memorial of the late Andrew Holmes, Esq., M.D., LL.D., late Dean of the Faculty of Medicine, to be given to the best student in the graduating class in Medicine who shall undergo a special examination in all the branches, whether Primary or Final.

In 1874 a Gold and Silver Medal were given by his Excellency the Earl of Dufferin, Governor General of Canada, for competition in the Faculty of Arts, and continued till 1878.

In 1878 the "Sutherland Gold Medal" was founded by Mrs. Sutherland of Montreal, in memory of her late husband, Prof. William Sutherland, M.D., for competition in the classes of Theoretical and Practical Chemistry in the Faculty of Medicine, together with creditable standing in the Primary Examinations.

In 1875 the "Neil Stewart prize of $20 in Hebrew" was endowed by Neil Stewart, Esq., of Vankleek Hill, in the sum of $340.

In 1880 a Gold and Silver Medal were given by His Excellency the Marquis of Lorne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science; continued till 1883.

In 1883 a Gold, Silver and Bronze Medal were given by R. J. Wicksteed, Esq., M.A., LL.D., for competition in "Physical Culture" by Students in the Graduating Class and 2nd and 3rd years who have attended the University Gymnasium.

VI. SUBSCRIPTIONS TO THE GENERAL ENDOWMENT.

1856.

John Gordon McKenzie, Esq.	$2000	Charles Alexander, Esq.	$600
Ira Gould, Esq.	2000	Moses E. David, Esq.	600
John Frothingham, Esq.	2000	Wm. Carter, Esq.	600
John Torrance, Esq.	2000	Thomas Paton, Esq.	600
James B. Greenshields, Esq.	1200	Wm. Workman, Esq.	600
William Busby Lambe, Esq.	1200	Honourable Sir A. T. Galt.	600
Sir George Simpson, Knight.	1000	Honourable Luther H. Holton.	600
Henry Thomas, Esq.	1000	Henry Lyman, Esq.	600
John Redpath, Esq.	1000	David Torrance, Esq.	600
James McDougall, Esq.	1000	Edwin Atwater, Esq.	600
James Torrance, Esq.	1000	Theodore Hart, Esq.	600
Honourable James Ferrier.	1000	William Forsyth Grant, Esq.	600
John Smith, Esq.	1000	Robert Campbell, Esq.	600
Harrison Stephens, Esq.	1000	Alfred Savage, Esq.	600
Henry Chapman, Esq.	600	James Ferrier, Jr., Esq.	600
Honourable Peter McGill.	600	William Stephens, Esq.	600
John James Day, Esq.	600	N. S. Whitney, Esq.	600
Thomas Brown Anderson, Esq.	600	William Dow, Esq.	600
Peter Redpath, Esq.	600	William Watson, Esq.	600
Thomas M. Taylor, Esq.	600	Edward Major, Esq.	600
Joseph McKay, Esq.	600	Honourable Charles Dewey Day.	200
Donald Lorn McDougall, Esq.	600	John R. Esdaile, Esq.	200
Honourable Sir John Rose.	600		

1871.

William Molson, Esq.	$5000	T. W. Ritchie, Esq.	$600
William C. McDonald, Esq.	5000	Messrs. A. & W. Robertson.	600
Thomas Workman, Esq.	5000	Messrs. Sinclair, Jack & Co.	250
John Frothingham, Esq.	5000	John Reddy, Esq., M.D.	100
J. H. R. Molson, Esq.	2000	Wm. Lunn, Esq.	100
John McLennan, Esq.	1000	Kenneth Campbell, Esq.	100
B. Gibb, Esq.	600	R. A. Ramsay, Esq.	100
W. Notman, Esq.	600	William Rose, Esq.	50

1881–82.

Hugh McLennan, Esq.	$5000	O. S. Wood, Esq.	1000
G. A. Drummond, Esq.	4000	J. S. McLachlan, Esq.	1000
George Hague, Esq.	3000	J. B. Greenshields, Esq. (London)	1000
M. H. Gault, Esq.	2000	Warden King, Esq.	1000
Andrew Rebertson, Esq.	1000	W. B. Cumming	1000
Robert Campbell, Esq.	1000	Mrs. Hew Ramsay	500
J. Hickson, Esq., & Mrs. Hickson	1000	R. A. Ramsay, Esq.	500
Mrs. Andrew Dow	1000	H. H. Wood, Esq.	500
Alexander Murray, Esq.	1000	James Burnett, Esq.	500
Miss Orkney	1000	Charles Gibb, Esq.	500
Hector Mackenzie, Esq.	1000		
			$28 500

VII. SUBSCRIPTIONS FOR CURRENT EXPENSES IN 1881–82.

Principal Dawson	$1000	Being	$1000
J. H. R. Molson, Esq.	1000	Per annum, 5 years, being	5000
George Stephen, Esq.	1000	" " "	5000
Hon. Donald A. Smith.	1000	" " "	5000
David Morrice, Esq.	200	" " "	1000
Messrs. Gault Brothers & Co.	200	" " "	1000
Messrs. A. S. & S. H. Ewing	200	" " "	1000
Hon. Robert Mackay	300	Per annum, 2 years, being	600
Jonathan Hodgson, Esq.	100	Per annum, 5 years, being	500
Thomas Craig, Esq.	100	Per annum, 5 years, being	500
Geo. M. Kinghorn, Esq.	100	" " "	500
John Rankin, Esq.	200	Being	200
John Duncan, Esq.	200	"	200
Robert Benny, Esq.	100	"	100
Miss E. A. Ramsay	100	"	100
Hugh Paton, Esq.	50	For 2 years, being	100
George Brush, Esq.	25	For 5 years, being	125
J. M. Douglas, Esq.	50	Being	50
James Court, Esq.	50	"	50
David J. Greenshields, Esq.	300	"	300

VIII. ENDOWMENT FOR FACULTY OF APPLIED SCIENCE.

1871.

Daniel Torrance, Esq.	$5000
George Moffatt, Esq.	1000
Charles J. Brydges, Esq.	1000
Robert J. Reekie, Esq.	1000

IX. ANNUAL SUBSCRIPTIONS IN AID OF THE FACULTY OF APPLIED SCIENCE.

1871.

Hon. James Ferrier (per annum, for 10 years)	$100
Peter Redpath, Esq. (per annum, for 10 years)	400
John H. R. Molson, Esq. (per annum, for 10 years)	400
George H. Frothingham, Esq. (per annum, for 7 years)	400
M. James Claxton, Esq. (per annum, for 6 years)	100
Donald Ross, Esq. (per annum, for 5 years)	50

1878–79.

Miss Mary Frothingham (per annum, for 3 years)	$400
H. McLennan, Esq. (per annum, for 5 years)	100
A. F. Gault, Esq., do do	100
Gilbert Scott, Esq., for 2 years	100
Joseph Hickson, Esq., do	100
Principal Dawson, do	300
His Excellency the Marquis of Lorne	500
Mrs. Redpath (Terrace Bank)	100

X. SUBSCRIPTIONS FOR SPECIAL OBJECTS.

Subscriptions for the purchase of Philosophical Apparatus, 1867.

William Molson, Esq	$500	John Frothingham, Esq	$100
John H. R. Molson, Esq	500	David Torrance, Esq	100
Peter Redpath, Esq	500		
George Moffatt, Esq	250		$2,050
Andrew Robertson, Esq	100		

Subscriptions for the erection of a fire-proof Building for the Carpenter Collection of Shells, 1868.

Peter Redpath, Esq	$500	Wm. Dow, Esq	$100
William Molson, Esq	500	Thomas Rimmer, Esq	100
Harrison Stephens, Esq	100	Andrew Robertson, Esq	100
Robert J. Reekie, Esq	100	Mrs. Redpath	100
John H. R. Molson, Esq	100	Benaiah Gibb, Esq	50
Sir William E. Logan, F.R.S.	100	Honourable John Rose	50
John Molson, Esq	100		
Thos. Workman, Esq., M.P.	100		$2,180
Geo. H. Frothingham, Esq.	100		

Subscriptions for the erection of the Lodge and Gates.

William Molson, Esq	$100	James A. Mathewson, Esq	$100
John H. R. Molson, Esq	100	Peter Redpath, Esq	100
William Workman, Esq	100	G. H. Frothingham, Esq.	100
Joseph Tiffin, Jr., Esq	100	G. D. Ferrier, Esq	100
Thos. J. Claxton, Esq	100	Geo. W. Warner, Esq	100
James Linton, Esq	100	John Smith, Esq	100
William McDougall, Esq	100	Charles Alexander, Esq	100
Charles J. Brydges, Esq	100	J. Evans, Esq	100
George Drummond, Esq	100	Henry Lyman, Esq	100
Thomas Rimmer, Esq	100		
William Dow, Esq	100		$2,100
John Frothingham, Esq	100		

Subscriptions for the internal fittings of the Library and Museum of the Faculty of Medicine, 1872.

G. W. Campbell, A.M., M.D..	$1200	Robert Craik, M.D.....	200
Wm. E. Scott, M.D.....	200	Geo. E. Fenwick, M.D.....	200
Wm. Wright, M.D.....	200	Joseph M. Drake, M.D.....	200
Robert P. Howard, M.D.....	200	George Ross, M.A., M.D.....	50
Duncan C. McCallum, M.D....	200		

Library and Museum Funds.

Wm. Molson, Esq., for Library Fund.....	$4000	Hon. F. W. Torrance, Mental and Moral Philosophy Book Fund.	1000
Wm. Molson, Esq., for Museum Fund.....	2000	Mrs. Redpath, for the endowment of the Wm. Wood Redpath Library Fund.....	1000
		A Friend by the Hon. F. W. Torrance.....	400

Subscriptions for Library, Museum and Apparatus.

Mrs. G. H. Frothingham, for the arrangement of Dr. Carpenter's Collection of Mazatlan Shells.....	$ 233	T. J. Claxton, Esq., £50 sterling for additions to the Museum..	$250
A Lady, for Museum expenses..	1000	John Thorburn, M.A., for the Library	90

A Lady, for the purchase of Mining Models.....	$1000
Thos. McDougall, Esq., for the same.....	25
J. Livesey, Esq., through Dr. Harrington, for the same.....	50
George Stephen, Esq., for the same.....	50
Charles Gibb, B.A., donation for Apparatus in Applied Science.....	50
Andrew Drummond, Esq., to Library Fund of Faculty of Applied Science.	25
A Telescope and Astronomical Instruments, the gift of Charles T. Blackman, Esquire, of Montreal, and called after his name.	
The Local Committee for the reception (1881) of American Society of Civil Engineers..... For the purchase of appliances for the department of Civil Engineering in Faculty of Applied Science.....	475

Subscriptions for Physiological Laboratory of Medical Faculty, 1879.

Dr. Campbell.....	$100	Dr. Ross.....	$50
Dr. Howard.....	100	Dr. Roddick.....	50
Dr. Craik.....	100	Dr. Buller.....	50
Dr. McCallum.....	100	Dr. Gardner.....	50
Dr. Drake.....	100	Dr. Osler.....	50
Dr. Godfrey.....	100		
Dr. McEachran, F.R.C.V.S....	100		$ 950

Miscellaneous.

Hon. C. Dunkin, M.P., in aid of the chair of Practical Chemistry.....	$1200	T. M. Thompson, Esq., $250 for two Exhibitions in September, 1871; $200 for two Exhibitions in 1872.....	$450
Principal Dawson, in aid of the same.....	1200	Rev. Colin C. Stewart, for the "Stewart Prize in Hebrew.".	60
P. Redpath, Esq., do do.....	226		

Terminated in 1875.

R. A. Ramsay, M.A., B.C.L., to defray the expenses of re-erecting the tomb of the late Hon. James McGill $150 00

XI. ENDOWMENT, HELD IN TRUST BY THE BOARD OF ROYAL INSTITUTION.

The "Hannah Willard Lyman Memorial Fund," contributed by subscription of former pupils of Miss Lyman, and invested as a permanent Endowment, to furnish annually a Scholarship or Prize in a College for Women affiliated to the University; or in Classes for the Higher Education of Women approved by the University. The amount of the fund is at present $1,100.

XII. SPECIAL COLLECTIONS OF BOOKS PRESENTED TO THE LIBRARY.

1. The Peter Redpath Collection of Historical Books—presented by Peter Redpath, Esq., of Montreal, 2198 Volumes.
2. The Robson Collection of works in Archæology and general Literature, presented by Dr. John Robson of Warrington, England, 3436 Volumes.
3. The Charles Alexander Collection of Classical Works, presented by C. Alexander, Esq., of Montreal, 221 Volumes.
4. Frederick Griffin, Esq., Q.C., Collection of Books, being the whole of his Library, bequeathed by his will, 2692 Volumes.
5. The Hon. Mr. Justice MacKay, Collection of Books, being the whole of his Library, 1902 volumes.

XIII. SPECIAL COLLECTIONS PRESENTED TO THE MUSEUM.

1. The Holmes Herbarium—presented by the late Andrew F. Holmes, M.D.
2. The Carpenter Collection of Shells—presented by the late P. P. Carpenter, Ph.D.
3. The Collection of Casts of Ivory Carvings issued by the Arundel Society—presented by Henry Chapman, Esq.
4. The McCulloch Collection of Birds and Mammals, collected by the late Dr. M. McCulloch, of Montreal, and presented by his heirs.
5. The Logan Memorial Collection of Specimens in Geology and Natural History, presented by the heirs of the late Sir W. E. Logan, LL.D., F.R.S.
6. The Dawson Collection in Geology and Palæontology, being the Private Collections of Principal Dawson, presented by him to the Museum.

(See also "List of Donations to the Library and Museum," printed annually in the Calendar and Report of the Museum.)

New Shakespeare Society's Prize, Session 1881-1882.—The examination for this prize which is awarded for knowledge of Hamlet, King Lear, Othello and Macbeth, will be held in December, 1883.

THE GRADUATES' FUNDS.

THE FUND FOR ENDOWMENT OF THE LIBRARY.

The Graduates' Society of the University, in 1876, passed the following Resolution :—

"*Resolved* :—" That the members and graduates be invited to subscribe "to a fund for the endowment of the Libraries of the University ; said fund to be "invested and the proceeds applied under the supervision of the Council of the "Society in annual additions to the Libraries ; an equitable division of said pro- "ceeds to be made by the Council between the University Library and those of "the Professional Faculties."

(In terms thereof, the following subscriptions have been announced to date May 1st, 1883). They are payable in one sum, or in instalments as subscribers have elected.

Alphabetically Arranged.

Baynes, O'Hara, B.C.L.....	$ 50	Lyman, F. S., B.A., B.C.L.....	50
Bethune, M. B., M.A., B.C.L....	50	Lyman, H. H., M.A	100
Blackader, Alex. D., B.A., M.D..	50	Molson, Wm., M.D.....	100
Browne, A. A., B.A., M.D.....	50	Mackenzie, Fred., B.C.L.....	100
Cline, J. D., B.A., M.D.....	25	Maclaren, J. J., M.A., B.C.L....	100
Cushing, Lemuel, LL.D., B.C.L..	25	McCord, D. R., M.A., B.C.L....	100
Dougall, J. R., M.A.....	50	McGregor, James, LL.D.....	80
Ells, R. W., M.A	50	Macleod, C. H., Ma.E	50
Empson, Rev. J., M.A.....	25	Macmaster, D., B.C.L.....	100
Gardner, Wm., M.D	100	Marler, Wm. M., B.A.,B.C.L....	125
Gibb, Charles, B.A.....	50	Osler, Wm., M.D	100
Gilman, F. E., LL.D., B.C.L.....	100	Ramsay, R. A., M.A., B.C.L.....	100
Gould, C. H., B.A.....	100	Rexford, Rev. E. I., B.A.....	50
Hall, J. S. Jr., B.A., B.C.L.....	50	Robertson, Alex., B.A.....	100
Hall, Rev. W., M.A.....	10	Robins, S. P., LL.D.....	50
Harrington, B. J., B.A., Ph.D...	50	Roddick, T. G., M.D	100
Hicks, F. W., M.A.....	50	Ross, George, M.A., M.D.....	100
Holton, Edward, B.C.L.....	100	Shepherd, F. J., M.D.....	100
Hutchison, M., B.C.L.....	5	Torrance, J. F., B.A., B. App. Sc.	100
Keller, F. J., B.C.L.....	25	Trenholme, N. W., M.A., B.C.L..	100
Kelley, F. W., M.A., Ph.D	100		
Laing, Rev. R., M.A.....	100	Total to date.....	$3020

THE DAWSON PRINCIPALSHIP FOUNDATION.

The Graduates' Society of the University, in 1880, and in commemoration of the completion by Dr. Dawson of his twenty-fifth year as Principal, resolved to raise, with the assistance of their friends, a Fund towards the Endowment of the Principalship, under the above name.

Details of the scheme are set forth in a circular issued by the Society ; copies can be had from the Treasurer, H. H. Lyman, Esq., M.A., B.C.L. The following subscriptions have been announced to date May 1st, 1883. They are payable in one sum, in instalments without interest, or with interest till payment of capital, as subscribers have elected.

Alphabetically Arranged.

Abbott, H., B.C.L.	$ 60
Archibald J. S., B.C.L.	20
Bethune, M. B., M.A., B.C.L.	50
Carter, C. B., B.C.L.	100
Cruikshank, W. G.,B.C.L.	100
Dougall, J. R., M.A.,	250
Dawson, W. B., M.A., Ma.E.	50
Gibb, C., B.A.	100
Hutchison, M., B.C.L.	400
Hall, Rev. Wm., M.A.	100
Hall, J. S., jr., B.A., B.C.L.	100
Harrington, B. J., B.A., Ph.D.	50
Kirby, J., LL.D., D.C.L	50
Lighthall, W. D., B.A., B.C.L.	100
Lyman, H. H., M.A.	100
Lyman, A. C., M.A., B.C.L.	50
Leet, S. P., B.C.L.	100
McCormick, D., B C.L	100
McLennan, J. S., B.A.	100
McGibbon, R. D., B.A., B.C.L.	100
McGown, M., jr., B.A., B.C.L.	50
Ramsay, R. A., B.A., B.C.L.	50
Stewart, J., M.D	60
Stewart, D. M., B.C.L.	20
Stephens, C. S., B.C.L.	100
Spencer, J. W., B.A.Sc., Ph.D.	50
Tait, M. M., B.C.L.	100
Taylor, A. D.,B.A., B.C.L.	100
Trenholme, N. W., M.A., B.C.L.	400
Total to date	$3010

ACADEMICAL YEAR, 1883-84.

SEPTEMBER, 1883

1 Saturday	
2 SUNDAY	
3 Monday	Normal School opens.
4 Tuesday	
5 Wednesday	Meeting of Normal School Committee.
6 Thursday	
7 Friday	
8 Saturday	
9 SUNDAY	
10 Monday	
11 Tuesday	
12 Wednesday	
13 Thursday	
14 Friday	
15 Saturday	Meetings Fac. Arts and App. Science.
16 SUNDAY	
17 Monday	Mat. and Supp. Ex'ns in Classics Exhib. and Scholarship Exam.
18 Tuesday	Mat. and Supp. Ex'ns in Mathematics. Exhibition & Scholarship Ex'ns.
19 Wednesday	Mat. and Supp. Ex'ns in English, Logic, Men. and Mor. Phil. Exhib. and Sch. Exam'ns.
20 Thursday	Mat. and Supp. Ex'ns in Modern Lang's and Nat. Sc.; Exhib. and Sch. Exam'ns.
21 Friday	Lect's in Arts & App. Sc. begin.
22 Saturday	Meetings of Faculty of Arts and of Board of Governors.
23 SUNDAY	
24 Monday	
25 Tuesday	
26 Wednesday	Summer Essays in Applied Sc. given in.
27 Thursday	
28 Friday	
29 Saturday	
30 SUNDAY	

OCTOBER, 1883.

1 Monday	Meeting of Faculty of Arts. Session of Medical and Law Faculties begins.
2 Tuesday	
3 Wednesday	Meeting of Nor. Sch. Committee.
4 Thursday	
5 Friday	
6 Saturday	Founder's Birthday. Matriculation Exam's in Med.
7 SUNDAY	
8 Monday	The William Molson Hall opened 1862. Meeting of Faculty of Arts.
9 Tuesday	
10 Wednesday	
11 Thursday	Meeting of Fac. of Applied Sc.
12 Friday	
13 Saturday	
14 SUNDAY	
15 Monday	
16 Tuesday	
17 Wednesday	
18 Thursday	
19 Friday	
20 Saturday	
21 SUNDAY	
22 Monday	Meeting Museum Committee.
23 Tuesday	Meeting Library Committee.
24 Wednesday	Regular Meeting of Corporation. School Examiners appointed, Reports on Schol'ship & Exh. Accounts audited.
25 Thursday	
26 Friday	
27 Saturday	Meeting of Governors.
28 SUNDAY	
29 Monday	Meeting of Faculty of Arts.
30 Tuesday	
34 Wednesday	

NOVEMBER, 1883.

1 Thursday	
2 Friday	
3 Saturday	
4 SUNDAY	
5 Monday	
6 Tuesday	
7 Wednesday	Meet' of Nor. Sch'l Com'tee.
8 Thursday	Meeting of Fac. App. Science
9 Friday	
10 Saturday	
11 SUNDAY	
12 Monday	Meeting of Faculty of Arts.
13 Tuesday	
14 Wednesday	
15 Thursday	
16 Friday	
17 Saturday	
18 SUNDAY	
19 Monday	
20 Tuesday	
21 Wednesday	
22 Thursday	
23 Friday	
24 Saturday	Meeting of Governors.
25 SUNDAY	
26 Monday	Meeting of Faculty of Arts.
27 Tuesday	
28 Wednesday	
29 Thursday	
30 Friday	

DECEMBER, 1883.

1 Saturday	
2 SUNDAY	
3 Monday	
4 Tuesday	
5 Wednesday	Meeting of Nor. Sch. Com'tee
6 Thursday	Meeting of Fac. of App. Sc.
7 Friday	Lectures in Arts end.
8 Saturday	
9 SUNDAY	
10 Monday	
11 Tuesday	Christmas Exam. begin.
12 Wednesday	
13 Thursday	
14 Friday	Lectures in App Sc. end.
15 Saturday	
16 SUNDAY	
17 Monday	
18 Tuesday	
19 Wednesday	
20 Thursday	
21 Friday	Christmas Eacation! begins.
22 Saturday	Meeting of Governors.
23 SUNDAY	
24 Monday	Christmas-Day.
25 Tuesday	
26 Wednesday	
27 Thursday	
28 Friday	
29 Saturday	
30 SUNDAY	
31 Monday	

JANUARY, 1884.

1	Tuesday	
2	Wednesday	Meeting of Nor. Sch'l Comm'tee
3	Thursday	
4	Friday	
5	Saturday	Christmas Vacation ends.
6	**SUNDAY**	
7	Monday	Meeting of Faculty of Arts. Lec.
8	Tuesday	in Arts, Law, Med. & Applied
9	Wednesday	Science recommence.
10	Thursday	Meeting of Fac. of App. Science.
11	Friday	
12	Saturday	
13	**SUNDAY**	
14	Monday	
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	
19	Saturday	
20	**SUNDAY**	
21	Monday	Meeting of Museum Committee. Meeting of Faculty of Arts.
22	Tuesday	Meeting of Library Committee.
23	Wednesday	Regular Meeting of Corporation. Examiners appointed. Annual Report to Visitor.
24	Thursday	
25	Friday	Theses for M.A & LL.D. to be sent in to the Vice-Dean.
26	Saturday	Meeting of Governors.
27	**SUNDAY**	
28	Monday	
29	Tuesday	
30	Wednesday	
31	Thursday	

FEBRUARY, 1884.

1	Friday	
2	Saturday	Theses for Deg. of B.C.L. to be sent in to Dean of Fac. of Law
3	**SUNDAY**	
4	Monday	
5	Tuesday	
6	Wednesday	Meeting of Nor. Sc Committee.
7	Thursday	Meeting of Examiners.
8	Friday	
9	Saturday	
10	**SUNDAY**	
11	Monday	Meeting of Faculty of Arts.
12	Tuesday	
13	Wednesday	
14	Thursday	Meeting of Fac. App. Science.
15	Friday	Supplemental Examinations.
16	Saturday	
17	**SUNDAY**	
18	Monday	Meeting of Faculty of Arts.
19	Tuesday	
20	Wednesday	
21	Thursday	
22	Friday	
23	Saturday	Meeting of Governors.
24	**SUNDAY**	
25	Monday	
26	Tuesday	
27	Wednesday	No Lectures.
28	Thursday	
29	Friday	

MARCH, 1884.

1	Saturday	Theses for Degree of B.C.L to be sent in to Dean of Faculty.
2	**SUNDAY**	
3	Monday	Meeting of Faculty of Arts.
4	Tuesday	
5	Wednesday	Meeting of Nor. Sc. Committee
6	Thursday	Examinations in Law. Meeting of Fac. of App. Science.
7	Friday	Examinations in Law.
8	Saturday	
9	**SUNDAY**	
10	Monday	Examinations in Law.
11	Tuesday	Examinations in Law.
12	Wednesday	Examinations in Law.
13	Thursday	Examinations in Law.
14	Friday	Examinations in Law. Lectures in Medicine end.
15	Saturday	Exam. in Botany, Med. Fac.
16	**SUNDAY**	
17	Monday	Meeting of Faculty of Arts.
18	Tuesday	
19	Wednesday	Primary Examinations in Med.
20	Thursday	Primary Examinations in Med.
21	Friday	Final Examinations in Med.
22	Saturday	Meeting of Governors.
23	**SUNDAY**	
24	Monday	Final Examinations in Med.
25	Tuesday	
26	Wednesday	Meeting of Faculty of Arts. Reports of Attendance on Lects.
27	Thursday	
28	Friday	Lect. in Arts and App. Sc. end.
29	Saturday	
30	**SUNDAY**	
31	Monday	Convocation for Degrees in Med

APRIL, 1884.

1	Tuesday	Meeting of Fac. of Arts, B.A. Honour Examinations begin. Ordinary Examinations in Arts and App. Science begin. Convocation for Degrees in Law.
2	Wednesday	Meeting of Nor. Sc. Committee.
3	Thursday	
4	Friday	
5	Saturday	
6	**SUNDAY**	
7	Monday	
8	Tuesday	
9	Wednesday	Meeting of Fac. of App. Science
10	Thursday	
11	Friday	G'd-Friday. Easter vac. begins.
12	Saturday	
13	**SUNDAY**	Easter-day.
14	Monday	
15	Tuesday	Easter vacation ends.
16	Wednesday	Meeting of Fac. of Arts. Meeting of Examiners.
17	Thursday	
18	Friday	
19	Saturday	
20	**SUNDAY**	
21	Monday	Meeting of Museum Committee.
22	Tuesday	Meeting of Library Committee.
23	Wednesday	Regular Meeting of Corporation
24	Thursday	
25	Friday	
26	Saturday	Meeting of Governors. Meeting of Examin's. Declaration of Results of Examinat's.
27	**SUNDAY**	
28	Monday	
29	Tuesday	
30	Wednesday	Meeting of Convocation.

MAY, 1884.

1 Thursday	
2 Friday	
3 Saturday	
4 SUNDAY	
5 Monday	
6 Tuesday	
7 Wednesday	Normal School Committee.
8 Thursday	
9 Friday	
10 Saturday	
11 SUNDAY	
12 Monday	
13 Tuesday	
14 Wednesday	Meeting of Examiners for Sch'l Examinations.
15 Thursday	
16 Friday	
17 Saturday	
18 SUNDAY	
19 Monday	
20 Tuesday	
21 Wednesday	
22 Thursday	
23 Friday	
24 Saturday	Queen's Birth-Day.
25 SUNDAY	
26 Monday	
27 Tuesday	
28 Wednesday	
29 Thursday	
30 Friday	
31 Saturday	Meeting of Governors.

JUNE, 1884.

1 SUNDAY	Whit-Sunday.
2 Monday	Exams. in Nor. School begin. Examinations for Certificate of Associate in Arts begin.
3 Tuesday	
4 Wednesday	Normal School Committee.
5 Thursday	
6 Friday	
7 Saturday	
8 SUNDAY	
9 Monday	
10 Tuesday	
11 Wednesday	
12 Thursday	
13 Friday	
14 Saturday	
15 SUNDAY	
16 Monday	
17 Tuesday	
18 Wednesday	
19 Thursday	Declaration of results of School Examinations.
20 Friday	
21 Saturday	
22 SUNDAY	
23 Monday	Meeting Museum Committee.
24 Tuesday	Meeting of Library Committee.
25 Wednesday	Regular Meeting of Corporat'n.
26 Thursday	Report of Normal School.
27 Friday	Normal Sch. closes for Summer Vacation.
28 Saturday	Meeting of Governors.
29 SUNDAY	
30 Monday	

JULY, 1884.

1 Tuesday	
2 Wednesday	
3 Thursday	
4 Friday	
5 Saturday	
6 SUNDAY	
7 Monday	
8 Tuesday	
9 Wednesday	
10 Thursday	
11 Friday	
12 Saturday	
13 SUNDAY	
14 Monday	
15 Tuesday	
16 Wednesday	
17 Thursday	
18 Friday	
19 Saturday	
20 SUNDAY	
21 Monday	
22 Tuesday	
23 Wednesday	
24 Thursday	
25 Friday	
26 Saturday	
27 SUNDAY	
28 Monday	
29 Tuesday	
30 Wednesday	
31 Thursday	

AUGUST, 1884.

1 Friday	
2 Saturday	
3 SUNDAY	
4 Monday	
5 Tuesday	
6 Wednesday	
7 Thursday	
8 Friday	
9 Saturday	
10 SUNDAY	
11 Monday	
12 Tuesday	
13 Wednesday	
14 Thursday	
15 Friday	
16 Saturday	
17 SUNDAY	
18 Monday	
19 Tuesday	
20 Wednesday	
21 Thursday	
22 Friday	
23 Saturday	
24 SUNDAY	
25 Monday	
26 Tuesday	
27 Wednesday	
28 Thursday	
29 Friday	
30 Saturday	
31 SUNDAY	

EXAMINATIONS.—1883–84.

Faculty of Applied Science.

CHRISTMAS, 1883.

Dec.	DAYS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
14	Frid.	Mathematics.	Botany.		
17	Mond.	French.	French (p.m.), Exp. Physics.	Exp. Physics.	
18	Tues.	English.	Mathematics.	Mathematics.	
19	Wed.	Chemistry.	Chemistry.	Geology.	
20	Thur.		Mineralogy.	French.	
21	Friday	German.	German.	German.	Mathematics.

SESSIONAL, 1884.

Mar.	DAYS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
31	Mond.	Freehand Drawing.	Descript'e Geometry	Descript'e Geometry	Mineralogy (adv.)
Apr. 1	Tues.		Materials.	Materials.	Materials.
2	Wed.		Essay.	Essay.	Essay.
3	Thur.		Exp. Physics.	Exp. Physics.	
4	Frid.	French.	French.	Applied Mechanics.	Applied Mechanics.
5	Satur.		Practical Chemistry.	Practical Chemistry.	
7	Mond.	Chemistry.	Chemistry.	Applied Mechanics.	Applied Mechanics, Geology (adv.)
8	Tues.	English.	English.	English.	
9	Wed.	Practical Chemistry.	Railway Work.	Mining, Railway Work.	Machinery and Millwork, Railway Work.
10	Thur.		Mechanism.	Mineralogy & Geology.	App. Mechanics, Assaying.
11	Frid.	Vacation.			
12	Satur.				
14	Mond.				
15	Tues.	Mathematics.	Mathematics.	Mathematics.	Applied Mechanics.
16	Wed.		Mineralogy.	Surveying.	
17	Thur.		German.	French.	Hydraulics.
18	Frid.	German.	Botany.	Mechanical Work.	
19	Satur.	Mathematics.	Mathematics.	Mathematics.	Steam.
21	Mond.			Ap. Mechan's (ad) German.	App. Mecha nics (ad
22	Tues.	Mathematics.	Mathematics.	Mathematics.	Geology (adv.)
23	Wed.		Theoretical Chem.		Mechanical Work. Steam (adv.)
24	Thur.		Mechanical Work, Surveying.		
25	Frid.				Hydraulics (adv.), Geology (Adv.)
26	Satur.				
28	Mond.	Results declared.			
29	Tues.				
30	Wed.	Convocation.			

EXAMINATIONS.—1883-84.

Faculty of Arts.

CHRISTMAS, 1883.

Dec	DAYS	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
12	Wed.	Greek.	Greek.	Math. Physics.	Math. Physics.
13	Thu.	Latin.	Latin.	Met aphysics.	
14	Fri.	Mathematics.	Botany.	English.	Ethics.
17	Mon.	French.	French, P. M.	Exp. Physics.	Exp. Physics.
18	Tues.	English.	Logic.	Greek.	English.
19	Wed.	Chemistry.	Mathematics.	Latin.	Geology.
20	Thu.		English & German.	Mineralogy.	German, P.M.
21	Fri.	Hebrew, A.M. German, P.M.	Hebrew, A.M.	Hebrew. A.M. French & German, P.M.	French & Hebrew.

SESSIONAL AND HONOUR EXAMINATIONS, 1884.

Apl.	DAYS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	B. A. HONOURS. FOURTH YEAR.
1	Tues.	Greek.	Greek.	Math. Physics.	Ethics.
2	Wed.	Latin.	Latin.	Math. Physics.	Ethics.
3	Thu.	Greek & Roman History.	Latin Prose Comp.	Exp'l Physics.	Exp'l. Physics.
4	Fri.	French.	French.	Metaphysics.	English.
5	Sat.				
6	Sun.				
7	Mon.	Chemistry.	English.		B. A. Honours.
8	Tues.	English.		Greek.	Math. Physics.
9	Wed.		Mathematics.	Latin.	Math. Physics.
10	Thu.	Mathematics.	Mathematics.	Latin Prose Comp.	Geology.
11	Fri.	Good Friday.	Vacation.		
12	Sat.				
13	Sun.	Easter-day.			
14	Mon.				
15	Tues.				
16	Wed.	Mathematics.	Hebrew.	Mineralogy.	Greek.
17	Thu.	Hebrew.	German.	French.	Latin.
18	Fri.	German.	Botany.	English.	History.
19	Sat.				
20	Sun.				French, German, Hebrew.
21	Mon.		Logic.	German & Hebrew.	
22	Tues.				B. A. Honours.
23	Wed.				
24	Thu.	Honour Exms.	Honour Exms.	Honour Exms.	B. A. Honour Ex.
25	Fri.	Honour Exms.	Honour Exms.	Honour Exms.	B. A. Honour Ex.
26	Sat.				
27	Sun.				
28	Mon.	Results declared.			
29	Tues.				
30	Wed.	Convocation.			

Faculty of Arts.

THE PRINCIPAL (Ex-officio).

Professors:—LEACH (*Emeritus*). DAWSON. MARKGRAF. JOHNSON. CORNISH.

Professors:—DAREY. MURRAY. HARRINGTON. MOYSE.

Dean of the Faculty:—Ven. ARCHDEACON LEACH, D.C.L., LL.D.
Vice-Dean:—ALEXANDER JOHNSON, LL.D.
Honorary Librarian:—Professor Cornish, LL.D.

[CONTENTS.—*Matriculation*, &c., § I.; *Exhibitions*, &c., § II.; *Course of Study*, § III.; *Examinations, Degrees*, &c., § IV.; *Exemptions*, &c., § V.; *Medals*, &c., § VI.; *Licensed Boarding Houses*, § VII.; *Attendance and Conduct*, § VIII.; *Library*, § IX.; *Peter Redpath Museum*, § X.; *Fees*, &c., § XI.; *Courses of Lectures*, § XII.]

The next Session of this Faculty will commence on September 17th, 1883, and will extend to May 1st, 1884.

§ I. MATRICULATION AND ADMISSION.

1. UNDERGRADUATES.—Candidates for Matriculation as Undergraduates are required to present themselves to the Vice-Dean of the Faculty, on the 17th of September, for examination; they may, however, enter after the commencement of the Session, if, on examination, found qualified to join the classes.

(*a.*) The subjects of examination for entrance into the First Year are Classics, Mathematics and English.

Examination for Entrance into the First Year.

In Classics.—Greek.—Xenophon, Anabasis, Book I.; or, Homer, Iliad, Book I.; Greek Grammar.

Latin.—Cicero, Orations I. and II. against Catiline; or, Virgil, Æneid, Book I.; Latin Grammar.

In Mathematics.—Arithmetic; Algebra, to Simple Equations, inclusive; Euclid's Elements, Books I., II., III.

In English.—Writing from Dictation. A paper on English Grammar *including Analysis*. A paper on the leading events of English History.

An equivalent amount of other books or other authors in Latin and Greek than those named may be accepted by the Examiners.

[Associates in Arts who, at their special Examination, have passed in Latin, Greek, Algebra and Geometry, are not required to present themselves for the Matriculation Examination.]

An *Advanced Examination* in any one or more of the subjects of the First Year will be held for such of the candidates as desire it. Candidates who pass creditably in this will be entitled to such exemption from the Lectures and from the Christmas Examinations of the First Year as the Faculty may determine. For the Advanced Examination in Classics two authors in Latin and two in Greek will be required, and the books fixed (see below) must be taken.

Candidates for the Advanced Examination must send notice to the Vice-Dean of their intention before the day of Examination, stating the subjects of the First Year and the extent of reading in each they purpose to submit.

Partial or Occasional Students (see below) in the First Year, who pass the April Sessional Examinations in one or more subjects will, if Candidates for Undergraduate standing in the First Year in the following September, be allowed to count these as Advanced Examinations under the above rule.

The *Courses in some of the subjects for Advanced Matriculation* are as follows :—

Classics.

Course for Advanced Matriculation :—

Greek.—Xenophon, Anabasis, Book I. ; Homer, Iliad, Book VI.

Latin.—Cicero, Orations I. and II. against Catiline ; Virgil, Æneid, Book II.

A paper on Greek and Latin Grammar, and Latin Prose Composition (Textbook, Smith's Principia Latina, Part IV).

Mathematics.

Candidates who pass a satisfactory Examination in the Arithmetic and Euclid of the First Year (see course for entrance into second year) will be exempt from lectures up to Christmas and from the Christmas Examination.

Candidates who, in addttion to the above, pass a satisfactory Examination in Algebra and Trigonometry, will be exempt from lectures altogether in these subjects in the First Year.

English.

Candidates who pass a satisfactory Examination on Morley's First Sketch of English Literature, Celtic period to Elizabethan period (inclusive), will be exempted from the lectures on literature during the First Year.

(*b.*) Candidates not matriculated in the University, or Partial Students of the First Year, may be admitted to the standing of students of the Second Year, provided that they pass the Sessional Examinations of the First Year, or an examination in the following subjects at the beginning of the Second Year :—

Examination for Entrance into the Second Year.

In Classics.—Greek.—Homer, Book VI.; Xenophon, Anabasis, Book I.; Grammar and Prose Composition.

Latin.—Virgil, Æneid, Book VI.; Cicero, Orations IV. against Catiline; Grammar and Prose Composition.

[An equivalent amount of other books or other authors in Latin and Greek than those named above may be accepted by the Examiners for entrance into the Second Year.]

In Mathematics.—

Euclid.—Books I., II., III., IV., VI., with defs. of Book V. (omitting Propositions 27, 28, 29, of Book VI.)

Algebra.—To end of Quadratic equations. (Colenso's Alg.)

Trignometry.—Galbraith and Haughton's Trigonometry, Chaps. 1, 2, 3, 4, 6, to beginning of numerical solution of plane triangles.

Arithmetic.—Elementary rules, Proportion, Interest, Discount, &c., Vulgar and Decimal Fractions, Square Root.

In English Literature.—Writing from Dictation, English Grammar, including Analysis, English Composition, British History (Collier).

In French.—De Fivas, Grammaire des Grammaires as far as Syntax; or (instead of French) *German*—in which knowledge sufficient to enable the Candidate to join the regular class will be required.

In Chemistry.—The Chemistry of the non-metallic elements, or of the more common metals.

[*Note.*—Candidates unable to pass in French or German are not excluded; but they are required to begin German, and to continue the study of it for two years. Candidates unable to pass in Chemistry are required to attend such of the lectures in the subject as are open to them, and to pass an examination at the end of the second year.]

c. Students of other Universities may be admitted, on the production of Certificates, to a like standing in this University, after examination by the Faculty.

3. Partial Students.—Candidates for Matriculation as Partial Students, taking three or more Courses of Lectures, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty.

4. Occasional Students.—Persons desirous of taking one or two Courses of Lectures, as Occasional Students, may apply to the Vice-Dean for entry in his Register, and may procure from the Secretary tickets for the Lectures they desire to attend.

Note.—Every Student is expected to present, on his entrance, a written intimation from his parent or guardian, of the name of the minister of religion under whose care and instruction it is desired that the Student shall be placed, who will thereupon be invited to place himself in communication with the Faculty on the subject. Failing such intimation from his parent or guardian, the Faculty will endeavour to establish befitting relations.

§ II. SCHOLARSHIPS AND EXHIBITIONS.

General Regulations.

1. A Scholarship is tenable for *two* years. An Exhibition for *one* year.

2. Scholarships are open for competition to Students who have passed the University Intermediate Examination, provided that not more than three Sessions have elapsed since their Matriculation ; and also to Candidates who have obtained what the Faculty may deem equivalent standing in some other University.

3. Scholarships are divided into two classes :—[1] *Science* Scholarships ; [2] *Classical and Modern Language* Scholarships. The subjects of Examination for each are as follows :—

Science Scholarships.—Differential and Integral Calculus ; Analytic Geometry ; Plane and Spherical Trigonometry ; Higher Algebra and Theory of Equations ; Botany ; Chemistry ; Logic.

Classical and Modern Language Scholarships.— Greek ; Latin ; English Composition ; English Language, Literature, and History ; French.

4. Exhibitions are assigned to the First and Second Years.

First Year Exhibitions are open for competition to candidates for entrance into the First Year.

Second Year Exhibitions are open for competition to Students who have passed the First Year Sessional Examinations, provided that not more than two Sessions have elapsed since their Matriculation ; and also to candidates for entrance into the Second Year.

The subjects of Examination are as follows :—

First Year Exhibitions.—Classics, Mathematics, English.

Second Year Exhibitions.—Classics, Mathematics, English Language and Literature, Chemistry, French.

5. The First and Second Year Exhibition Examinations will, for Candidates who have not previously entered the University, be regarded as Matriculation Examinations.

6. No student can hold more than one Exhibition or Scholarship at the same time ; but four of the first Year Exhibitioners will be granted exemption from the Sessional fees throughout their College Course, under Presentation Scholarships from the Governor General. (See below.)

7. Exhibitions and Scholarships will not necessarily be awarded to the best answerers at the Examinations. Absolute merit will be required.

8. If in any one College Year there be not a sufficient number of Candidates showing absolute merit, any one or more of the Exhibitions or Scholarships offered for competition may be transferred to more deserving Candidates in another year.

9. A successful Candidate must, in order to retain his Scholarship or Exhibition, proceed regularly with his College Course to the satisfaction of the Faculty.

10. The annual income of the Scholarships or Exhibitions will be paid in four instalments, viz. :—In October, December, February and April, about the 20th day of each month.

11. The Examinations will be held at the beginning of every Session.

There are at present fourteen Scholarships and Exhibitions.

THE JANE REDPATH EXHIBITION, founded by Mrs. Redpath, of Terrace Bank, Montreal :—value $100 yearly.

THE MCDONALD SCHOLARSHIPS AND EXHIBITIONS, ten in number, founded by W. C. McDonald, Esq., Montreal :—value, $125 each, yearly.

THE CHARLES ALEXANDER SCHOLARSHIP, founded by Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects ; —value, $120 yearly.

THE GEORGE HAGUE EXHIBITION, for the encouragement of the study of Classics, value $125 yearly, given by George Hague, Esq., Montreal, for four years, beginning with the Session 1881–2.

The MAJOR H. MILLS SCHOLARSHIP founded by request of the late Major Hiram Mills. Value $100 yearly.

EXHIBITIONS AND SCHOLARSHIPS OFFERED FOR COMPETITION AT THE OPENING OF THE SESSION, SEPT., 1883.

To Students entering the First Year, Four Exhibitions of $125, *and One of* $100.

Subjects of Examination :—

Greek.—Homer, Iliad, bk. VI. ; Xenophon, Anabasis, bk. II. ; Demosthenes, Olynthiacs, I. and II.

Latin.—Cicero, Pro Archiâ ; Horace, Odes, bk. I. ; Virgil, Æneid, bk. V., vss. 1-361 ; Latin Prose Composition.

A paper on Greek and Latin Grammar.

Text-Books.—Hadley's Elements of Greek Grammar. Arnold's Greek Prose Composition, Exercises 1 to 25. Dr. Wm. Smith's Smaller Latin Grammar, and Principia Latina, Part IV.

Mathematics—.Euclid, bks. I., II., III., IV. ; Algebra to end of Harmonical Progression (Colenso) ; Arithmetic.

English.—English Grammar and Composition.—(Bain's Grammar as far as Derivation.) Special exercises in Grammar and Composition.

The First Year Exhibitions will be awarded to the best answerers in the above course, provided there be absolute merit.

But in distributing the Exhibitions of higher value among the successful candidates, answering in the following subjects will be taken into account also :—

1. A re-translation into Latin of an English version of some passage from one of the easier Latin Prose writers (for specimens see Smith's Principia Latina, Part V.).

2. Euclid, Book VI. (omitting Props. 27, 28, 29), with Defs. of Book V.

3. English :—An Examination upon one of Shakespeare's plays. For 1883 —Julius Cæsar.

To Students entering the Second Year, Four Exhibitions of $125, *and one of* $100.

Subjects of Examination:—

Greek.—Homer, Iliad, bk. XVIII.; Xenophon, Hellenics, bk. II.; Herodotus, bk. VII., Chaps. 148 to end of book.

Latin.—Virgil, Æneid, bk. VII.; Horace, Odes, bk. III.; Livy, bk. XXI., Chaps. 1-29; Cicero, Select Letters (Pritchard and Bernard).

Greek and Latin Prose Composition.

A paper on Grammar and History.

Text-Books.—Dr. William Smith's History of Greece. Liddell's History of Rome. Hadley's Greek Grammar. Smith's Student's Latin Grammar. Arnold's Greek Prose Composition. Smith's Principia Latina, Parts IV. and V.

Mathematics.—The Mathematics (Ordinary and Honour) of First Year.

English Literature.—Bain's Grammar. Shakespeare, *As You Like It.* Trench, *Study of Words.*

Chemistry.—Nichol's abridgment of Eliot and Storer's manual, as far as p. 208.

French.—De Fivas, Grammaire de Grammaires, to paragraph No. 422. Lafontaine, les Fables, livres III. and IV. Molière, le Malade imaginaire.

To Students entering the Third Year, Three Scholarships of $125, *and one of* $120; *tenable for Two Years.*

One of these is offered in Mathematics and Logic and one in Natural Science and Logic, as follow :—

1. *Mathematics.*—Differential Calculus (Williamson, Chaps. 1, 2, 3, 4, 7, 9; Chap. 12, Arts. 168-193 inclusive; Chap. 17, Arts. 225-243 inclusive). Integral Calculus (Williamson, Chaps. 1, 2, 3, 4, 5; Chap. 7, Arts. 126-140 inclusive; Chap. 8, Arts. 150-156 inclusive; Chap. 9, Arts. 168-176 inclusive). Analytic Geometry (Salmon's Conic Sections, Chaps. 1 to 13 (omitting Chap. 8), with part of Chap. 14. Hind's Plane and Spherical Trigonometry. Salmon's Modern Higher Algebra (first four chapters). Todhunter's Theory of Equations.

   Logic, as in Jevons' Elementary Lessons on Logic.

2. *Natural Science.—Botany*, as in Gray's Structural and Systematic Botany. *Canadian Botany*, including a practical acquaintance with all the orders of Phænogams and Acrogens. *Chemistry*, Nichol's abridgment of Eliot and Storer's manual of Chemistry.

   Logic, as in Jevons' Elementary Lessons on Logic.

Two will be given on an Examination in Classics and Modern Languages, as follows:—

Classics.—Greek.—Euripides, Medea; Demosthenes, the Olynthiacs; Xenophon, Hellenics, Book I.; Herodotus, Book VIII.; Thucydides, Book VI. *Latin.*—Horace, Satires, Book I., and Epistles, Book I.; Virgil, Georgics, Book I.; Terence, Adelphi; Tacitus, Annals, Book I.; Pliny, Select Letters (Pritchard and Bernard; Clarendon Press Series). Greek and Latin Prose Composition.

History.—Text-books.—Rawlinson's Manual of Ancient History; Smith's Greece; Liddell's Rome.

English Language and Literature.—Spalding's English Literature; Shakespeare, Julius Cæsar; Trench, Study of Words; Trench, English, Past and Present.

English Composition.—(High marks will be given for this subject, in order to encourage the practice of it, after the models of the best writers).

French.—Racine, Britannicus; Molière, les Femmes savantes. De Fivas' Grammaire des Grammaires. Les Ecrivains célèbres de la France:—Bonnefon. Translation from English into French.

Classical Subjects for Exhibitions, September, 1884.

GREEK.—*First Year.*

Homer, Iliad, bk. IV.; Xenophon, Anabasis, bk. II.; Demosthenes, Olynthiacs, I. and II.

LATIN.—*First Year.*

Cicero, Cato Major; Virgil, Æneid, bk. V., vss. 1-361; Livy, bk. IX., Chaps. 1-19.

GREEK.—*Second Year.*

Homer, Iliad, bk. XVIII.; Xenophon, Hellenics, bk. I.; Herodotus bk. III., Chaps. 1 to 67.

LATIN.—*Second Year.*

Virgil, Æneid, bk. VIII.; Horace, Odes, bk. III.; Livy, bk. XXII. Chaps. 1-23; Cicero, Select Letters (Pritchard and Bernard).

English Subjects for Exhibitions, &c., September, 1884.

First Year.—English Grammar and Composition. (Bain's Grammar as far as Derivation). Shakespeare, *Julius Cæsar.*

Second Year.—Bain's Grammar.—Shakespeare, *As You Like It.* Trench, *Study of Words.*

Third Year.—Spalding's English Literature (cap. VI. to end of book.) Shakespeare, *Tempest.* Milton, *Paradise Lost,* books I. and II. Trench, *Study of Words.*

EXEMPTIONS FROM FEES UNDER PRESENTATION SCHOLARSHIPS, &c.

A number of these are in the gift of Benefactors, and entitle the Students holding them to exemption from the Sessional Fees in the Faculty of Arts. Sixteen have been placed by the Governors at the disposal of His Excellency the Governor-General. Candidates must pass the usual Matriculation Examination.

[By command of His Excellency, four of these Exemptions will be offered for competition in the First Year Exhibition Examinations of the ensuing session.]

Eight Exemptions from fees may be granted by the Board of Governors, from time to time to the most successful students who may present themselves as candidates. By order of the Board one of these is given annually to the *Dux* of the High School of Montreal, and one to the Dux of any other Academy or High School sending up, in one year, three or more candidates competent to pass creditably the Matriculation Examination.

In the event of any Academy or High School in the Province of Quebec offering for competition among pupils an Annual Bursary in the Faculty of Arts, of not less than $80, the Governors will add the amount of the fees of tuition thereto.

An Exemption from fees may be given annually to any teacher holding the Model School or Academy Diploma of the McGill Normal School, recommended by the Principal and Professors of the School, and passing creditably the Matriculation Examination in Arts.

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§ III. COURSE OF STUDY.

1. Undergraduates are arranged according to their standing, as Students of the First, Second, Third or Fourth Year. They are required to attend all the courses of Lectures and pass the examinations appointed for their several years, under the Regulations of the Faculty as to attendance and conduct; the only exceptions are those in favour of Honour and Professional Students, stated in § V.

ORDINARY COURSE FOR THE DEGREE OF B.A.

First Year.—Classics; French or German; English Grammar and Literature; Pure Mathematics; Elementary Chemistry.

Second Year.—Classics; French or German; English Literature; Elementary Psychology and Logic; Pure Mathematics; Botany.

Third Year.—Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics); any two of the following departments—French or German (whichever the Student has taken in the first two years); Experimental Physics; Zoology; English and Rhetoric; together with one *Additional Department*, for which see below.

Fourth Year.—Latin or Greek (same language as in Third Year); Mathematical Physics (as in Third Year); Mental and Moral Philosophy; any two of the following departments—French or German (same language as in previous years); Experimental Physics; Geology; History; and one *Additional Department* (the same as chosen in the Third Year), for which see below.

(N.B. The *Additional Departments* referred to above, of which one must be selected, the same department being taken in both the third and fourth years, are as follows, viz.:—(1) Classics, including Latin and Greek. (2) Mathematical Physics, including Optics, with Astronomy. (3) Natural Science, including Chemistry, Mineralogy, Geology of Canada. (4) Mental and Moral Philosophy. 5) English with History. (6) One Modern Language (or Hebrew.)

Undergraduates are required to study either French or German for two years (viz., in the First and Second Years), taking the same language in each year. Any Student failing to pass the Examination at the end of the Second Year will be required to pass a Supplemental Examination, or to take an additional Session in the Language in which he has failed. In addition to the obligatory, there are other lectures, attendance on which is optional.

Students who intend to join any Theological School, on giving written notice to this effect at the beginning of the First Year, may take Hebrew instead of French or German.

2. At the Examination for the Degree of B.A., Honours are given in the following subjects, for which special Honour Courses are provided:—[For details see under § XII.]

1. *Classical Languages and Literature.*
2. *Mathematics and Physics.*
3. *Logic and Mental and Moral Philosophy.*
4. *English Language, Literature and History.*
5. *Geology and other Natural Sciences.*
6. *Modern Languages with History (Lorne Medal Course).*

Honours are given in the above subjects in the Third Year also, and in Mathematics in the First and Second Years as well.

Candidates for Honours are allowed exemptions under conditions stated in § V.

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§ IV. EXAMINATIONS.

COLLEGE EXAMINATIONS.

For Students of McGill College only.

1. There are two Examinations in each year; one at Christmas and the other at the end of the Session. In each of these the students who pass are arranged according to their answering as 1st Class, 2nd Class, and 3rd Class.

In the Fourth Year only, the University Examination for B.A. takes the place of the Sessional Examination.

2. Students who fail in any subject in the Christmas Examinations are required to pass a Supplemental Examination in that subject before admission to the Sessional Examinations.

3. Students who fail in one subject in the Sessional Examinations are required to pass a Supplemental Examination in it. Should they fail in this, they will be required in the following Session to attend the Lectures and pass the Examination in the subject in which they have failed, in addition to those of the Ordinary Course, or to pass the Examination alone without attending Lectures, at the discretion of the Faculty.

4. Failure in two or more subjects at the Sessional Examinations involves the loss of the Session. The Faculty may permit the Student to recover his standing by passing a Supplemental Examination at the beginning of the ensuing Session. For the purpose of this Regulation, Classics and Mathematics are each regarded as two subjects.

5. The time for the Supplemental Examination will be fixed by the Faculty; and such Examination will not be granted at any other time, except by special permission of the Faculty, and on payment of a fee of $5.

UNIVERSITY EXAMINATIONS.

For Students of McGill College and of Colleges affiliated in Arts.

I. FOR THE DEGREE OF B.A.

There are three University Examinations :—The *Matriculation*, at entrance ; the *Intermediate*, at the end of the Second Year ; and the *Final*, at the end of the Fourth Year.

1. The subjects of the Matriculation Examination are stated in Section 1.

2. In the Intermediate Examination the subjects are Classics and Pure Mathematics, Logic, and the English Language, with one other Modern Language, or Botany. Theological Students are allowed to take Hebrew instead of a Modern Language. The subjects for the Examination of 1883 are as follows :—

Classics.—Greek.—Euripides.—Medea.
Latin.—Horace.—Epistles, Book I.
Latin Prose Composition.

Mathematics.—Arithmetic.
Euclid, Books I., II., III., IV., VI., and defs. of Book V.
Algebra, to Quadratic Equations, inclusive.
Trigonometry, including use of Logarithms.

Logic.—Jevons' Elementary Lessons in Logic.

English.—Spalding's History of English Literature or Lectures (see course). A paper on the essentials of British History (Collier).

With one of the following :—

1. *Botany and Vegetable Physiology.*—Structural and Systematic Botany, as in Gray's Text-Book, omitting the Descriptions of the Orders.
2. *French.*—Molière :—Le Malade Imaginaire, l'Avare. Racine :—Phèdre. Les Ecrivains célèbres de la France :—Bonnefon. Translation into French.
3. *German.*—Schmidt's German Guide; Adler's Reader: Translation into German.
4. *Hebrew.*—Grammar to the end of the Irregular verbs. Translation from the Book of Genesis, first three Chapters. Exercises :—Hebrew into English, and English into Hebrew.

3. For the Final Examination the subjects are those appointed as compulsory in the Third and Fourth Years, viz.; Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics); Mental and Moral Philosophy; and those departments (two "Ordinary" and one "Additional") which the Candidate may have selected for himself in the Third and Fourth Years. See § III,

The subjects in detail for 1884 are as follows:—

Classics.

Greek.—Æschines, Contra Ctesiphontem; Æschylus, Prometheus Vinctus. Greek History. (Or Latin as follows):—

Latin.—Tacitus, Annals, Book II; Juvenal, Satires VIII. and X. Roman History.

* In Classics Greek may be reckoned as the Additional Department by students taking Latin as their Ordinary subject, and, vice versa, Latin by students taking Greek.

Mathematical Physics.

Mechanics and Hydrostatics, as in Galbraith & Haughton's text-books.

* Optics and Astronomy.

Mental and Moral Philosophy.

Calderwood's Handbook of Moral Philosophy (omitting the Historical Sketch, pp. 43-76), and Rogers' Manual of Political Economy.

*Lectures, with Schwegler's History of Philosophy Chaps. 23-45 inclusive), and Lorimer's Institutes of Law.

Natural Science.

Mineralogy and Geology, as in Dana's Manuals and Dawson's Lecture Notes.

* Advanced Mineralogy and Lithology, with Geology of Canada or Practical Chemistry as in § XII.

Experimental Physics.

1.—*Light.*—Theories. —Reflection. —Refraction. —Dispersion. —Interference and Diffraction.—Double Refraction.—Polarization. 2.—*Heat.*—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat.

History.

History.—Freeman:—General sketch of European History; Green's Short History of the English People: The Tudor and Stuart Periods.

* As in § XII.

French.

The Course of French for the Fourth Year.

* The subjects of the Additional Department as in § IX.

German.

Schiller, Geschichte des 30 jahrigen Krieges; Goethe, Iphigenie auf Tauris; General paper on Grammar; Translation into German, and German Prose Composition.

* As in § XII.

Hebrew. (Theological Students only.)

Hebrew Grammar; Translation from first four chapters of Isaiah: any three of the Psalms.

* The Chaldee and Syriac Languages, as in § XII.

* Additional Departments, one of which is to be selected by each candidate.

For details of each subject, see Courses of Lectures, § XII.

At the B.A. Ordinary Examination, of those Candidates who obtain the required aggregate of marks, only those who pass in the First Class in three of the departments, and not less than Second Class in the remainder, shall be entitled to be placed in the First Class for the Ordinary Degree.

II. FOR THE DEGREE OF M. A.

Candidates are required to prepare and submit to the Faculty of Arts, not less than two months before proceeding to the degree, a Thesis on some Literary or Scientific subject previously approved by the Faculty.

The last day in the present session for sending in Theses for M.A will be Jan. 25th, 1884.

All candidates, except those who have taken First Rank B. A. Honours, or have passed First Class in the Ordinary Examinations for the Degree of B. A., are required to pass an Examination, also, either in Literature or in Science, as each Candidate may select.

For the details of the Examination, application must be made to the Faculty before the above date.

III. DEGREE OF LL.D.

Every Candidate for the Degree of LL.D. in Course is required to prepare and submit to the Faculty of Arts, not less than three months before proceeding to the degree, twenty-five printed copies of a Thesis on some Literary or Scientific subject previously approved by the Faculty, and possessing such a degree of Literary or Scientific merit, and evidencing such originality of thought or extent of research, as shall, in the opinion of the Faculty, justify it in recommending him for that degree.

Every Candidate for the Degree of LL.D. in Course is required to submit to the Faculty of Arts, with his Thesis, a list of books, treating of some one branch of Literature or of Science, satisfactory to the Faculty, in which he is prepared to submit to examination, and on which he shall be examined, unless otherwise ordered by vote of the Faculty.

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§ V. SPECIAL PROVISIONS FOR CANDIDATES FOR HONOURS AND FOR PROFESSIONAL STUDENTS.

I. Candidates for Honours in the Second Year.

Candidates for Honours in the Second Year who have obtained Honours in the First Year may omit the lectures and examinations in either a Modern Language (or Hebrew) or Botany, giving notice of the subject at the beginning of the Session.

II. Candidates for Honours in the Third Year.

The following are the "Ordinary" Departments of the Third Year, the study of four of which is, in general, compulsory (see § III.) :—Latin or Greek; French or German (or Hebrew); Mechanics and Hydrostatics; Experimental Physics; Zoology; English Literature and Rhetoric.

Every Candidate for Honours in the Third Year must, in order to obtain exemptions, have passed the Intermediate Examination, and must in the Sessional Examination of the Second Year have taken first class in the subject in which he proposes to compete for Honours; such candidates shall be entitled in the Third Year to exemption from lectures and examinations in any one of the four "Ordinary" departments required by the general rule, except that in which he is a Candidate for Honours. A Candidate, however, who desires to take Experimental Physics is required to take Mechanics and Hydrostatics also. A Candidate for Honours in the Third Year who has failed to obtain Honours, shall be required to take the same examinations for B.A. as the ordinary undergraduates.

III. Candidates for B.A. Honours.

The following are the "Ordinary" Departments of the Fourth Year, in which courses of lectures are delivered: attendance on four of these courses, in distinct departments, is in general required :—Latin or Greek; French or German or Spanish (or Hebrew); Mental and Moral Philosophy; Experimental Physics; Geology and Mineralogy; History.

A Student who has taken Honours of the first rank in the Third Year, and desires to be a Candidate for B.A. Honours, shall be required to attend two only of the above courses of lectures, and to pass the two corresponding examinations only at the ordinary B.A. Examination. The "additional department" required for the ordinary B.A. (see § IV.) forms part of the Honour course. A Student who has taken Second Rank Honours in the Third Year and desires to be a Candidate for B.A. Honours in the same subject shall be allowed to continue in the Fourth Year the study of the same departments that he has taken in the Third Year.

IV. Professional Students.

Students of the Third and Fourth Years, matriculated in the Faculties of Law, Medicine or Applied Science of the University, or in any affiliated Theological College, are entitled to exemption from the Additional Department or any one of the Ordinary Departments required in the Third and Fourth years. (For rule concerning "Special Certificates" see §VI.)

To be allowed these privileges in either year, they must give notice at the commencement of the Session to the Dean of the Faculty of their intention to claim exemptions as Professional Students, and must produce at the end of the Session certificates of attendance on a full course of Professional Lectures during the year for which the exemptions are claimed.

V. Students of Affiliated Theological Colleges.

1. Such Students, whether entered as Matriculated or Occasional, are subject to the regulations of the Faculty of Arts in the same manner as other students.

2. The Faculty will make formal reports to the Governing body of the Theological College to which any such Students may belong, as to:—[1] their conduct and attendance on the classes of the Faculty; and [2] their standing in the several examinations; such reports to be furnished after the Christmas and Sessional Examinations severally, if called for.

3. Matriculated Students are allowed no exemptions in the course for the degree of B.A. until they have passed the Intermediate Examination; but they may take Hebrew in the First and Second Years, instead of French or German.

4. In the Third and Fourth Years they are allowed exemptions, as stated above.

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§ VI. MEDALS, HONOURS, PRIZES AND CLASSING.

1. GOLD MEDALS will be awarded in the B.A. Honour Examinations to Students who take the highest Honours of the First Rank in the subjects stated below, and who shall have passed creditably the Ordinary Examinations for the Degree of B.A.:—

The *Henry Chapman Gold Medal*, for the Classical Languages and Literature.

The *Prince of Wales Gold Medal*, for Logic and Mental and Moral Philosophy.

The *Anne Molson Gold Medal*, for Mathematics and Natural Philosophy.

The *Shakespeare Gold Medal*, for the English Language, Literature and History.

The *Logan Gold Medal*, for Geology and other Natural Sciences.

In the event of there being no Candidate for any Medal, or of none of the Candidates fulfilling the required conditions, the Medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes in the subjects for which the Medal was intended. For details, see announcements of the several subjects below.

2. HONOURS, of First or Second Rank, will be awarded to those Matriculated Students who have successfully passed the Examinations in any Honour Course established by the Faculty (*N.B.—The Honour Course includes the Additional Department in each subject*), and have also passed creditably the ordinary Examinations in all the subjects proper to their year.

(*N.B.—By a recent Order of the Lieutenant-Governor of Ontario in Council, Honours in this University confer the same privileges in Ontario as Honours in the Universities of that Province, as regards certificates of eligibility for the duties of Public School Inspectors, and as regards exemption from the non-professional Examination of Teachers for First-Class Certificates for Grades "A and B."*)

3. SPECIAL CERTIFICATES will be given to those candidates for B.A. who shall have been placed in the First Class at the ordinary B.A. Examination, in which case exemptions (see § V.) in the fourth year can not be taken.

4. CERTIFICATES of High General Standing will be granted to those Matriculated Students who are placed in the First Class in the aggregate of the Studies proper to their year.

5. PRIZES OR CERTIFICATES to those Matriculated Students who may have distinguished themselves in the studies of a particular class, and have attended all the other classes proper to their year.

6. A Gold Medal will be offered, for the encouragement of the study of Modern Languages and Literature, with History.

The Regulations are as follows :—

1. The Subjects for competition shall be French and German or (for the present session) Spanish, together with the History part of the present Honour Course for the Shakespeare Medal.

2. The course of study shall extend over two years, viz., the Third and Fourth Years.

3. The successful Candidate must be capable of speaking and writing both languages correctly.

4. There shall be examinations in the subjects of the course in both the Third and Fourth years, at which Honours may be awarded to deserving Candidates.

5. The general conditions of competition, and the privileges as regards exemptions, shall be the same as for the other Gold Medals in the Faculty of Arts.

6. Students from other Faculties shall be allowed to compete, provided they pass the examinations of the Third and Fourth Years in the above subjects.

7. Candidates desiring to enter on the Third Year of the Course, who have not obtained First Class standing at the Intermediate or Sessional Examinations of the Second Year in Arts, are required to pass an examination in the work of the first two years of the course in Modern Languages, if called on to do so by the Professors.

8. The subjects of Examination shall be as follows :—

I. FRENCH.—*Third Year.*

Racine,—Phèdre ; Les Plaideurs.
Boileau,—L'Art Poétique.
Pascal,—Les Pensées.
La Bruyère,—Les Caractère .
Ampère,—Formation de la Langue française.

In addition to the ordinary and additional course as stated in the Calendar.

Fourth Year.

Molière,—Le Misanthrope.
Corneille,—Cinna.
La Rochefoucauld,—Les Maximes.
Montaigne,—Les Essais.
Auguste Brachet,—Grammaire historique.
Etudes des Anciens textes français (Demogeot).

In addition to the ordinary and additional course as stated in the Calendar.

II. GERMAN.—*Third Year.*

Wieland,—Oberon.
Schleicher,—Die Deutsche Sprache (History of the German Language).
History of German Literature from 1750, being a Critical Review of the Principal Writers of the Classical Period. The men of 'Sturm und Drang.' The Romantic Schools. Modern Lyric Poets, (Gostwick and Harrison's Outlines.)

With the Additional Department, prescribed for this year.

Fourth Year.

A special study of Goethe's 'Faust' (Part I.).
Selections from Heine's Lyrical Poems.
Schleicher,—Die Deutsche Sprache.
German Literature from 1150 to 1350 :—Mediæval Classic Writers—Epic, Lyric and Didactic Poetry—(Kurz, Leitfaden zur Geschichte der deutchen Litteratur).
With the Additional Department, prescribed for this year (excepting 'Moschzisker').

III. SPANISH.

Fourth Year. For this session only.

Composition.
Translation from English into Spanish.
Latter portion of Rabadan's Advanced Course.
Calderon's La Vida es sueno, and Il Alcalde de Zalamea.
History of Spanish Literature, Luis de Leon, Cervantes, Lyric Poetry, Ballad Poetry, Romancero del Cid, School of Salamanca.

IV. HISTORY.—(*See Honour Course for Shakespeare Medal.*)

The Competitive Examination of the Fourth year will include the work of both the Third and Fourth Years.

7. THE NEIL STEWART PRIZE of $20 is open to all Undergraduates of this, and also to Graduates of this or any other University, studying Theology in any College affiliated to this University, under the following rules :—

1. The prize will not be given for less than a thorough examination in Hebrew Grammar passed in the First Class, in reading and translating the Pentateuch and such poetic portions of the Scripture as may be determined.

2. In case competitors should fail to attain the above standard, the prize will be withheld, and a prize of Forty Dollars will be offered in the following year for the same.

[Course for the present year :—Hebrew Grammar (Gesenius) ; Translation and analysis of the first ten chapters of Genesis ; the prophet Habbakuk (the whole book) ; and the first five Psalms.

3. There will be two Examinations of three hours each ; one in Grammar and the other in Translation and Analysis.

This Prize, founded by the late Rev. C. C. Stewart, M. A., and terminated by his death, has been re-established by the liberality of Neil Stewart, Esq., of Vankleek Hill, and will be offered for competition next Session.

8. (*a*) EARLY ENGLISH TEXT SOCIETY'S PRIZE.—This Prize, the annual gift of the Early English Text Society, will be awarded for proficiency in (1) Anglo-Saxon, (2) Early English before Chaucer.

The subjects of Examination will be :—

(1) *The lectures of the Third and Fourth Years on Anglo-Saxon.*

(2) *Specimens of Early English (Clarendon Press Series, ed. Morris and Skeat,) Part II., A.D.* 1298—*A.D.* 1393. *The lay of Havelok the Dane (Early English Text Society, ed. Skeat).*

(*b*) NEW SHAKESPEARE SOCIETY'S PRIZE. This Prize, the annual gift of the New Shakespeare Society, will be awarded for a critical knowledge of the following plays of Shakespeare :—

Hamlet ; Macbeth ; Othello ; King Lear.

9. The names of those who have taken Honours, Certificates, or Prizes will be published in order of merit; with mention, in the case of Students of the First and Second Years, of the Schools in which their preliminary education has been received.

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§ VII. LICENSED BOARDING-HOUSES.

(*Regulations for Students in Arts, passed by the Corporation, April,* 1875.)

1. All Students under 21 years of age, not residing with parents or guardians, nor belonging to a Theological College, shall reside in

licensed boarding-houses, unless they produce written authority from parents or guardians to reside elsewhere.

2. Persons applying for a license to keep a boarding-house shall produce evidence satisfactory to the Principal as to their character and fitness, and the suitability of the house for the health and comfort of the Students. They shall also supply him with a statement of charges.

3. The keeper of the boarding-house shall report immediately to the Principal the entrance or departure of any Student, and any instance of immorality or disorderly conduct.

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§ VIII. ATTENDANCE AND CONDUCT.

All Students shall be subject to the following regulations for attendance and conduct :—

1. A Class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted ; and the said Class-book shall be submitted to the Faculty at all their ordinary meetings during the Session.

2. Each Professor shall call the roll immediately at the beginning of a lecture. Credit for attendance on any lecture may be refused on the grounds of lateness, inattention or neglect of study, or disorderly conduct in the Class-room. In the case last mentioned, the Student may, at the discretion of the Professor, be required to leave the Class-room. Persistence in any of the above offences against discipline after admonition by the Professor shall be reported to the Dean of Faculty. The Dean may, at his discretion, reprimand the Student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from Classes.

3. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

4. While in the College, or going to or from it, Students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the College buildings or grounds may admonish the Student, and if necessary report him to the Dean.

5. Every Student is required to attend regularly the religious services of the denomination to which he belongs, and to maintain without as well as within the walls of the College a good moral character.

6. When Students are brought before the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, impose fines, disqualify from competing for prizes and honours, suspend from Classes or report to the Corporation for expulsion.

7. Any Student who does not report his residence on or before Nov. 1st in each year is liable to a fine of one dollar.

8. Any Student injuring the furniture or buildings will be required to repair the same at his own expense, and will, in addition, be subject to such other penalty as the Faculty may see fit to inflict.

9. All cases of discipline involving the interest of more than one Faculty, or of the University in general, shall be immediately reported to the Principal, or, in his absence, to the Vice-Principal.

[NOTE.—All Students are required to appear in Academic dress while in or about the College buildings.]

§ IX. LIBRARY.

For Regulations see end of Calendar.

§ X. PETER REDPATH MUSEUM.

1. The Museum will be open every lawful day from 9 a.m. till 5 p.m., except when closed for any special reason by order of the Principal or Committee.

2. Students will obtain tickets of admission from the Principal on application.

3. Students will enter by the front door only, except when going to lectures.

4. Any Student wilfully defacing or injuring specimens, or removing the same, will be excluded from access to the Museum for the Session.

§ XI. FEES.

Matriculation Fee for the First Year (to be paid in the Year of Entrance only.....	$4 00
For the Second Year (exigible from Students who enter in the Second Year, and also from those who have failed in the First Year and re-enter in the Second Year on Examination).....	6 00
Sessional Fee.....	20 00
Library Fee.....	4 00
Gymnasium Fee.....	2 50

Undergraduates are required to pay all the above fees.

Partial Students, viz., those taking three or more Courses of Lectures, are required to pay the Matriculation, Library and Gymnasium Fees, and $5 for each Course which they attend, or $20 for all the courses.

Occasional Students taking one course of Lectures only, are required to pay $5 per Session for that course.

Occasional Students taking two courses of Lectures are required to pay the Library Fee and $5 for each course.

The Matriculation, Library, and Gymnasium Fees are exigible from Students holding exemptions from Sessional Fees.

Graduates in Arts are allowed to attend, without payment of fees, all lectures except those noted as requiring a special fee.

The fees must be paid to the Secretary and the tickets shown to the Vice-Dean within a fortnight after the commencement of attendance in each session. In case of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty and on payment of a fine of $2.

[All fines are applied to the purchase of books for the Library.]

Fee for the Degree of	*B.A.*	$ 5 00
" " "	*M.A.*	10 00
" " "	*LL.D.*	50 00

If the Degree of M.A. be granted, with permission to the Candidate, on special grounds, to be absent from Convocation, the fee is.....$25.00

The B.A. fee must be paid before Examination.

The M.A. fee must be sent to the Secretary of the University at the same time that the Candidate sends his Thesis to the Dean of the Faculty. This is a condition essential to the reception of his application.

A Bachelor of Arts or Master of Arts, intending to proceed to a higher Degree, is required, in addition to the above, to keep his name on the books of the University, by the annual payment of a fee of $2 to the Registrar of the University (which payment suffices also for Registration under Chap. III. of the Statutes of the University). He may, if he prefer it, compound for the above Annual fees, by the payment of $6 in one sum for the Master's Degree, or $30 for the Doctor's Degree, on or before the date of application for the Degree.

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§ XII. COURSES OF LECTURES.

I. ORDINARY COURSE.

1. CLASSICAL LITERATURE AND HISTORY.

Professor, Rev. G. CORNISH, M.A., LL.D.

GREEK.

First Year.—XENOPHON.—HELLENICS, Book I.
Second Year.—EURIPIDES.—MEDEA.
Third Year.—LYSIAS.—CONTRA ERATOSTHENEM.
ÆSCHYLUS.—PROMETHEUS VINCTUS.
Fourth Year.—ÆSCHINES.—CONTRA CTESIPHONTEM.

LATIN.

First Year.—VIRGIL.—ÆNEID, Book VIII.
CICERO.—EPISTOLAE SELECTAE.
Latin Prose Composition.
Second Year.—HORACE.—EPISTLES, Book I.
TACITUS.—GERMANIA, Chaps. I.-XXVII.
Latin Prose Composition.

Third Year.—JUVENAL.—SATIRES VIII. and X.
PLAUTUS.—AULULARIA.
Latin Prose Composition.

Fourth Year.—TACITUS.—ANNALS, Book II.
Latin Prose Composition.

In the work of the Class the attention of the Student is directed to the collateral subjects of History, Antiquities and Geography; also to the grammatical structure and affinities of the Greek and Latin Languages; and to Prosody and Accentuation.

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2. ENGLISH LANGUAGE AND LITERATURE.

(MOLSON PROFESSORSHIP.)

Professor, CHAS. E. MOYSE, B.A.

First Year.—English Language and Literature. Three Lectures a week.

The Lectures on Language exemplify the more important features in the history of English: Exercises on Analysis are given in once a week. The Lectures on Literature comprise the period between the Celts and Wordsworth. Students who have leisure will be advised as to their reading.

Second Year.—A Period of English Literature, and one Play of Shakespeare.

One Lecture a week.

During the Session of 1882-3, the Chief Poets and Prose writers of the Victorian period will form the subject of the Lectures. Shakespeare—*Tempest.*

Third Year.—Chaucer's Prologue to Canterbury Tales.

Lecture once a week.

Text-Book, Chaucer's Prologue, &c., Ed. Morris.

Additional Department.—Early English—Morris and Skeat, extt. I.-IX. inclusive.
Shakespeare—One Play.
Milton; Comus; Areopagitica; Par. Lost, Books I.-II.
Burke—Thoughts on Present Discontents; Reflections on French Revolution.
History—Green, to Stuart period.

Fourth Year.—History.

The Lectures will be a sketch of general European History from the fall of the Roman Empire to the end of the Eighteenth Century.

Additional Department.—Anglo-Saxon; Earle's Introduction and portions of Sweet's Reader.
Spenser—Faerie Queene, Book I.
Pope—Essay on Criticism, Essay on Man, Moral Essays.
Tennyson—In Memoriam.
History—Hallam's Middle Ages, 2 caps.
Buckle, Hist. of Civ. in England, 4 caps.

(The Lectures of the Additional Department in each year are comprised in a portion of the Honour Lectures.)

3. MENTAL AND MORAL PHILOSOPHY.

(JOHN FROTHINGHAM PROFESSORSHIP OF MENTAL AND MORAL PHILOSOPHY.)
Professor, REV. J. CLARK MURRAY, LL.D.

Second Year.—First Term.—Elementary Psychology. Second Term.—Logic.

Third Year.—*Additional Department.*—Advanced Logic and Psychology, leading to a discussion of the controversy between Idealism and Empirical Evolutionism. Text-books:—Mill's System of Logic (Books I., II., III.), and Murray's Outline of Hamilton's Philosophy.

Fourth Year.—First term.—The Psychological Basis of Ethics. Second Term.—Ethics Proper, comprising the elementary principles of Jurisprudence and Political Science. *Additional Department.*—Modern Philosophical Systems.

In the Third and Fourth Years Students are also required to write occasional Essays on Philosophical Subjects.

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4. FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. DAREY, M.A., B.C.L.

First Year.— Darey, Principes de Grammaire francaise.
LA FONTAINE, les Fables, livres V. et VI.
MOLIERE, le Malade imaginaire.
Dictation. Colloquial exercises.

Second Year.—DE FIVAS, Grammaire des Grammaires.
MOLIERE, l'Avare.—RACINE, Phèdre.
Translation into French.—DR. JOHNSON, Rasselas.
Les Ecrivains célèbres de la France to the end of XVIIth cent. —Bonnefon.
Dictation. Parsing. Colloquial exercises.

Third Year.—PONSARD, l'Honneur et l'Argent.
CORNEILLE, Horace.
Translation into French:—GOLDSMITH, The Vicar of Wakefield.
French Composition. Dictation.
Paul Albert, Litterature du XVIIIe. siècle.

Additional Department.—LA FONTAINE, les Fables.
RACINE, Les Plaideurs.
PONSARD, l'Honneur et l'Argent.
PAUL ALBERT, Litterature du XVIIe. siècle.
Translation into French:—GOLDSMITH, The Vicar of Wakefield.
Cogery:—Third French course.

Fourth Year.—BARRIERE et CAPENDUS, les Faux bons hommes.
EMILE SOUVESTRE, Un Philosophe sous les toits.
Les Ecrivains modernes de la France:—Bonnefon.
Translation into French:—Shakespeare, "As you like it."
French Composition. Dictation.

Additional Department.—MOLIERE, le Misanthrope.
AUG. BRACHET, Grammaire Historique.
BONNEFON, Les Auteurs Modernes.
EMILE SOUVESTRE :—Un Philosophe sous les toits.
Cogery :—Third French course.
Translation into French :—The Vicar of Wakefield.

The Lectures in the Third and Fourth Years are given in French.

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5. GERMAN LANGUAGE AND LITERATURE.

Professor, C. F. A. MARKGRAF, M.A.

I. Ordinary Course.

First and Second Years.—Schmidt's German Guide (1st, 2nd, and part of 3rd Course); Adler's Progressive German Reader (Selections from Sections 1-5); Translations, oral and written. Exercises in Parsing.

Third and Fourth Years.—Schmidt's German Guide 3rd part cont.); Whitney's Grammar (excerpts); Chamisso, Peter Schlemihl; Lessing, Minna von Barnhelm; Schiller, Wallenstein; History of German Literature from the earliest periods to the close of the 18th century (a brief survey, by the Professor); Translation into German; German Prose Composition.

II. Additional Department.

Third Year.—Whitney's German Grammar; Schiller, Wilhelm Tell; Tieck, Genovena; Koerner, Leyer and Schwert; History of German Literature (as in the Ordinary Course); Translation from English Prose writers.

Fourth Year.—Whitney's Grammar (cont.); Goethe, Iphigenie auf Tauris; Lessing, Nathan der Weise; Schiller, Geschichte des 30 jahrigen Krieges; Moschzisker's Guide to German Literature (Epoch VII., Sections I.-VI.; 1750-1850); Translation from English writers; German Prose Composition.

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6. HEBREW AND ORIENTAL LITERATURE.

Professor Coussirat.

Elementary Course.—(*For Students of the First and Second Years*).—Grammar;—Text-Book, J. Robert Wolf's Practical Hebrew Grammar, with exercises in orthography and etymology; Reading; Translation and Grammatical Analysis of Historical portions of the Scriptures—Syntax—Mishlé Shualim—Fables, &c.

Advanced Course.—For Students of the Second, Third and Fourth Years. Introduction to the Study of Hebrew Poetry—its spirit and characteristics. Lowth and Sarchi as Text-Books Translation from the Psalms, Job, Ruth, and Isaiah. Ancient compared with Modern Hebrew Poetry; the productions of Halevi, Gabirol, &c. Grammar (Gesenius Hebrew Grammar), Exercises, &c., continued.

Additional Department (Optional) :—for Third and Fourth Years.

The Chaldee Language :—Grammar, *Mebo Halashon Aramith* of J. Jeitteles. The Chaldee portions of Scripture. Targum of Onkelos and T. Yerushalmi.

The Syriac Language :—Grammar (Uhlemann's) and Translation.

The course comprises Lectures on the above Languages and their Literature in particular, with a general notice of the other Oriental Languages, their genius and peculiarities. Comparative Philology, affinity of Roots, &c., also receives due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, &c.

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7. MATHEMATICS AND NATURAL PHILOSOPHY.

(PETER REDPATH PROFESSORSHIP OF NATURAL PHILOSOPHY).

Professor, ALEXANDER JOHNSON, M.A., LL.D.

(In the work of the First Year assistance will be given by G. H. Chandler, M.A., Lecturer in Mathematics in the Faculty of Applied Science.)

MATHEMATICS.—(*First Year*)—Arithmetic.—Euclid, Books 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6), Todhunter's Edition.—Colenso's Algebra (Part I.) to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

MATHEMATICS.—(*Second Year*)—Arithmetic, Euclid, Algebra, and Trigonometry as before.—Nature and use of Logarithms.—Remainder of Galbraith and Haughton's Plane Trigonometry.

The course for the Intermediate University Examination consists of the Mathematics for the first two years.

MATHEMATICAL PHYSICS.—(*Third Year*)—Galbraith and Haughton's Mechanics, viz., *Statics*, First 3 chapters, omitting sec. 5, chapter I., and sect. 21, chapter II.; *Dynamics*, subjects of the First 5 chapters. Galbraith and Haughton's Hydrostatics.

Additional Department.—Optics (Galbraith and Haughton). Descriptive Astronomy (Lockyer's Elementary Astronomy, English edition; First three chapters, viz., The Stars and Nebulæ; The Sun; The Solar System). Students are recommended to use with this an "Easy Guide to the Constellations," by Gall.

A few special lectures may be given in the Additional Department towards the end of the Session.

ASTRONOMY.—(*Optional.*)—(*Fourth Year*)—Galbraith and Haughton's Astronomy—The lectures on this subject will be given before Christmas. This, with Optics, forms the Additional Department for the Fourth Year.

EXPERIMENTAL PHYSICS.—(*Third and Fourth Years*)—1.—*Light.*—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarization. 2.—*Heat.*—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3.—*Electricity*—Statical and Dynamical:—including Electro-Magnetism—

Magneto-Electricity—Thermo-Electricity—Diamagnetism—Electric Measurements —Practical Application to Telegraph, &c. 4.—*Magnetism.* 5.—*Sound.*—Theory of Undulations—Production and Propagation of Sound—Vibrations of Strings, Rods and Plates—Vibrations of Fluids—Musical Sounds. Text-Books: —Ganot's Treatise translated by Atkinson, and Tyndall on Heat and Sound. This Course extends over two years.

The Subjects for the Session 1883-84 are Light and Heat.

The Lectures in Mathematical and Experimental Physics will be illustrated by Apparatus, of which the College has a very good collection.

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8. GEOLOGY AND NATURAL HISTORY.

(LOGAN PROFESSORSHIP OF GEOLOGY.)

Professor J. W. DAWSON, LL.D., F.R.S., F.G.S.

B. J. HARRINGTON, B.A., Ph.D., Assistant Professor of Geology.

BOTANY.—(*Second Year.*)—Vegetable Histology and Organography. Nutrition and Reproduction of Plants. Classification. Descriptive Botany. Flora of Canada. Notices of Palæobotany and Geographical Botany.

Text Book.—Gray or Bessey.

[A prize of $20 will be given by the Professor for the best collection of plants and the greatest proficiency in their determination. The prize collections or duplicates of them to remain in the College Museum. Candidates must be students in Botany of the previous session.]

MINERALOGY AND LITHOLOGY.—(*Third Year.*)—Crystallography. Physical and Chemical Properties of Minerals. Description of species important as constituents of rocks. Elements of Lithology.

Text-Book.—Dana's Manual of Mineralogy.

MINERALOGY AND GEOLOGY.—(*Fourth Year.*)

1. *Mineralogy and Lithology.*—An elementary course in which attention is paid more particularly to such minerals and rocks as are important in Geology or useful in the Arts. (In the Session of 1884-5, Zoological Palaeontology will be substituted.)

2. *Stratigraphy, Chronological Geology and Palæontology.*—Data for determining the relative ages of Formations. Classification according to age. Fauna and Flora of the successive periods. Geology of British America.

Text-Books.—Dana's Manuals of Mineralogy and Geology, Dawson's Lecture Notes on Geology.

The Lectures in Natural History will be accompanied with Demonstrations in the Museum. Students in Natural History are also entitled to tickets of admission to the Museum of the Natural History Society of Montreal.

ADDITIONAL DEPARTMENT.—(*Third Year.*)

CHEMISTRY.—Theoretical and Practical Chemistry.

GEOLOGY.—Museum Studies in Palæontology.

ADDITIONAL DEPARTMENT.—(*Fourth Year.*)

MINERALOGY AND LITHOLOGY.—Chemical and Physical characters of Minerals, including Crystallography, the methods of determining species, and Descriptive Mineralogy. Composition of Rocks and their structure on the small scale; Classification of Rocks.

GEOLOGY.—Geology of British America. (Part of Honour Course.)

Or instead of the above, the Student may take as the "Additional Department" in the Fourth Year, a course of Practical Chemistry, in continuation of that of the Third Year.

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9. CHEMISTRY.

Lecturer, B. J. HARRINGTON, B.A., Ph.D.

First Year.—A Course of Lectures preparatory to the Course in Natural Science. The Lectures are illustrated by experiments, and treat of the Elementary Constitution of Matter, the laws of Chemical Combination by weight and volume, the Atomic Theory, Quantivalence, Chemical Formulæ and Equations, Chemical Affinity, characteristics of Acids, Bases and Salts, Compound Radicals, the preparation and properties of the non-metallic and metallic Elements and many of their compounds, &c. A few Lectures are also devoted to the consideration of some of the more important Organic Substances, including Starch, Sugar, the Vegetable Acids, Alcohol, Albumen, &c. During the Course attention is called, as far as possible, to the relations of Chemistry to the various manufacturing industries. The laboratory is supplied with the usual apparatus, including a balance by Becker & Sons, spectroscope by Duboscq, Oxy-hydrogen lamp and blowpipe, large gas-holders, &c.

Text-Book.—Nichol's Abridgment of Eliot and Storer's Manual of Chemistry.

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10. METEOROLOGY.

Superintendent of Observatory, C. H. MCLEOD, Ma.E.

Instruction in Meteorological Observations will be given in the Observatory, at hours to suit the convenience of the senior students.

Certificates will be granted to those students who pass a satisfactory examination on the construction and use of Meteorological Instruments and on the general facts of Meteorology.

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11. ELOCUTION.

MR. JOHN ANDREW, Instructor.

Students are recommended by the Faculty to avail themselves of the Instructions of Mr. Andrew, who will make arrangements for evening classes to meet during the Session.

12. GYMNASTICS.

MR. FREDERICK S. BARNJUM, Instructor.

The classes will meet at the University gymnasium, at hours to be announced at the commencement of the Session. The Wicksteed gold, silver and bronze medals (the gift of Dr. R. J. Wicksteed), are offered for competition to students of the graduating class, and to students who have had instruction in the gymnasium for two sessions, the gold medal to the former, the silver and bronze medals to the latter.

II. HONOUR COURSES.

1. CLASSICS.

B.A. HONOURS, BEING THE HONOUR COURSE FOR STUDENTS OF THE THIRD AND FOURTH YEARS.

Candidates for B.A. Honours in Classics will be examined in the following subjects:—

I. GREEK.

Plato.—Republic, Books I. and II.
Aristotle.—The Poetics.
Herodotus.—Books VIII. and IX.
Thucydides.—Books VI. and VII.
Xenophon.—Hellenics, Books I. and II.
Hesiod.—Works and Days.
Æschylus.—Prometheus Vinctus.
" Seven against Thebes.
Sophocles.—Antigone.
Euripides.—Hippolytus.
Aristophanes.—The Frogs.
Pindar.—Olympic Odes.
Theocritus.—Idylls I. to VI.
Demosthenes.—De Corona.
Æschines.—Contra Ctesiphontem.

II. LATIN.

Livy.—Books XXI. XXII. and XXIII.
Tacitus.—Annals, Books I. and II.
" Histories, Book I.
Virgil.—Æneid, Books I. to IV.
Plautus.—Aulularia.
Terence.—Adelphi.
Horace.—Satires, Book I.
Juvenal.—Satt. VIII. and X.
Persius.—Satt. V. and VI.
Cicero.—De Imperio Cn. Pompeii.
" De Officiis.

III. HISTORY OF GREECE AND ROME.

Text-Books :—

1. Grote's History of Greece.
2. Arnold's History of Rome.
3. Mommsen's History of Rome.
4. Mahaffy's History of Greek Literature.
5. Cruttwell's History of Roman Literature.
6. Cruttwell and Banton's Specimens of Roman Literature.
7. Donaldson's Theatre of the Greeks.

IV. COMPOSITION.

1. Composition in Greek and Latin Prose.
2. General paper on Grammar, History and Antiquities.

The Examination for B.A. Honours will extend over four days, in the morning from 9 to 12, and the afternoon from 2 to 5.

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2. MENTAL AND MORAL PHILOSOPHY.

The Lectures are devoted mainly to Ancient Philosophy in the Third Year, to Modern Philosophy in the Fourth. In addition to the Lectures, the Examination will comprise the first four of the following subjects in the Third Year, the last seven in the Fourth :—

1. Schwegler's History of Philosophy, Chapters 1-21 inclusive.
2. Cicero's De Natura Deorum.
3. Berkeley's Principles of Human Knowledge.
4. Thomson's Outlines of the Laws of Thought.
5. Aristotle's Nicomachean Ethics.
6. Descartes' Method and Meditations.
7. Spinoza's Ethics.
8. Watson's Philosophy of Kant in Extracts.
9. Mill's System of Logic.
10. Spencer's First Principles.
11. Maine's Ancient Law.

N.B.—The class-essays of candidates for honours are expected to display superior ability in the discussion of philosophical subjects.

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3. ENGLISH LANGUAGE, LITERATURE AND HISTORY.

The examination for Honours in the Third Year will be on the works in the following course :—

Language.—Anglo-Saxon.—The lectures of the Third Year.
Early English.—Specimens of Early English (Clarendon Press Series, ed. Morris and Skeat), Part II., extt. I.-IX., inclusive.

Literature.—Chaucer.—The Prologue to the Canterbury Tales, The Knight's Tale, The Nonne Prestes Tale (Clarendon Press Series, ed. Morris).
Spenser.—The Faerie Queene, Book I.
Milton.—Shorter English Poems; Areopagitica (ed. Arber).
Dryden.—Annus Mirabilis; Hind and Panther; Absalom and Achitophel. The Preface to the "Fables."
Wordsworth.—Prelude (Moxon's edition).

History.—The lectures on Constitutional History.
Hallam.—Middle Ages, caps. 1, 3, 5, 8, 9.
Macaulay.—Vol. I., cap. 1.

Lectures on the Honour Subjects of the Third Year.

Language.—Anglo-Saxon.—The essentials of the Anglo-Saxon Language and Literature. Text-book—Sweet's Anglo-Saxon Reader (Clarendon Press Series).

Literature.—A course on some of the special Honour subjects.

History.—Honour students are required to attend the Ordinary course of lectures on History.

B.A. HONOUR COURSE.

For B.A. Honours, the examination will be on a selected portionof the Literature of the Third Year Honour course and on the following subjects:—

Language.—Anglo-Saxon—The lectures of the Fourth Year.
Early English—Specimens of Early English (Clarendon Press Series, ed. Morris and Skeat), Part II., extt. X.-XX., inclusive.

Literature.—Shakespeare—Love's Labour's Lost, A Midsummer's Night's Dream Hamlet, The Tempest.
Ben Jonson—Every Man out of his Humour.
Pope—Essay on Criticism, Essay on Man, Moral Essays.
Cowper—The Task.
Campbell—The Pleasures of Hope.
Shelley—Cenci, Adonais.
Tennyson—Idylls of the King, In Memoriam.
Matthew Arnold—Essays in Criticism (the first two).

History.—The lectures of the Fourth year.
Hallam—Constitutional History, caps. 1, 5 to 14, inclusive.
Macaulay—Vol. I., caps. 2 and 3.

Lectures on the Honour Subjects of the Fourth Year.

Language.—Anglo-Saxon—Sweet's Anglo-Saxon Reader, and a portion of one of the longer Anglo-Saxon poems.

Literature.—A course on these special Honour subjects, viz:—the four prescribed plays of Shakespeare and Modern Poetry, with special reference to Tennyson's Idylls of the King, and the In Memoriam.

History.—Honour Students are required to attend the Course of Lectures on Constitutional History.

4. MATHEMATICS AND PHYSICS.

MATHEMATICS.—(*First Year.*)—McDowell's Exercises on Modern Geometry, &c.—Wood's Algebra—Todhunter's Theory of Equations (selected course).

The Honour lectures in the First Yea rbegin after Christmas. Candidates will be examined on the first half of McDowell's Exercises before admission to them.

MATHEMATICS.—(*Second Year*).—Hind's Plane and Spherical Trigonometry —Salmon's Conic Sections, chapters 1 to 7 and 9 to 13 inclusive.—Williamson's Differential and Integral Calculus (selected course).

MATHEMATICAL PHYSICS.—(*Third Year.*)—Minchin's Statics (omitting Chapters 15 and 16).—Tait & Steele, Dynamics of a Particle, chapters 1 to 7, inclusive.—Besant's Hydromechanics, Chaps. 1, 2, 3, 5.—Walton's Mechanical and Hydrostatical Problems.—Parkinson's Optics.—Godfray's Astronomy.

B.A. HONOUR COURSE.

PURE MATHEMATICS.—Williamson's Differential and Integral Calculus.—Boole's Differential Equations (selected course).—Salmon's Geometry of three Dimensions (selected course).

MECHANICS.—Minchin's Statics, except last chapter.—Tait & Steele, Dynamics of a Particle.—Routh's Dynamics of a Rigid Body (selected course). Besant's Hydromechanics.—Walton's Mechanical Examples.—Walton's Examples in Hydrostatics.

PHYSICAL ASTRONOMY.—Godfray's Lunar Theory, or Cheyne's Planetary Theory.

Newton's Principia, Lib. I., Sects. 1, 2, 3, 9, and 11.

LIGHT.—Lloyd's Wave Theory of Light.

ELECTRICITY AND MAGNETISM.—Treatise by Fleeming Jenkins.—Maxwell's Elementary Electricity.

HEAT, ACOUSTICS, } As in ordinary course.

Engineering students may be candidates for Honours.

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5. NATURAL HISTORY AND GEOLOGY.

THIRD YEAR.

(1) *Mineralogy:*—Crystallography. Physical and Chemical Properties of Minerals. Blow-pipe Analysis and determinative Mineralogy. Description of species important as constituents of Rocks.

2). *Lithology*:—Classes of Rocks. Texture and Composition. Description of the more commonly occurring Rocks.

(3) Directions for collection and study in the vacation.

B. A. HONOUR COURSE.

(1) *Mineralogy and Lithology:*—Description of Species, with particular reference to the Economic Minerals of Canada. Calculation of Mineralogical Formulæ, Quantivalent Ratios, &c. Description of Rocks; Microscopic Examination of Minerals and Rocks.

(2) *General Geology and Palæontology*:—An advanced course, in connection with which the students will be required to read Dana's Manual of Geology and Lyell's Student's Elements.

(3) *Canadian Geology*:—In connection with which the students will read Reports of the Geological Survey of Canada, and Dawson's Acadian Geology.

(4) Practical Exercises and Instruction in the methods of observation and of conducting Geological Explorations, and in the Study of Palæontology. Text books:—Geikie's Field Geology, Von Cotta on Ore Deposits, Nicholson's Palæontology.

The Lectures on the above subjects will be illustrated with Specimens and accompanied with Demonstrations in the Museum. Excursions for field work will be undertaken when practicable.

Candidates for Honours will be expected to attain to such proficiency as to be able to undertake original investigations in some at least of the subjects of study.

Students in the Faculty of Applied Science may be candidates for Honours.

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6. MODERN LANGUAGE WITH HISTORY.

See HONOUR COURSE in Modern Languages, page 35.

New Shakespeare Society's Prize, Sarnia 1881-1882.—The examination for this prize, which is awarded for knowledge of Hamlet, King Lear, Othello and Macbeth, will be held in December, 1883.

Lectures in the Undergraduate Course in the Faculty of Arts.

SESSION OF 1883–84.

	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
First Year.	9	Classics.	† Mathematics. (*b*)	English.	† Mathematics. (*b*)	Mathematics.
	10	Mathematics.	Classics.	Classics.	Classics.	Classics.
	11	English.	* French.	* French.	* French.	English.
	12	Elementary Chemistry.	* German. * Hebrew.	Mathematics.	* German. * Hebrew.	Elementary Chemistry.
Second Year.	9	* French	Logic.	* French.	* German.	* French.
	10	Classics.	Botany. (*d*)	Logic.	Botany. (*d*)	* German. † Mathematics.
	11	Mathematics.	Classics.	† Mathematics. Botany.	Classics.	Classics.
	12	† Mathematics. Botany.	* German. (*c*)	English.	* German. (*c*)	Logic.
Third Year.	9	English Literature.	Classics.	† Classics. † Math. Phy.	Classics.	† Classics. † English. (*e*)†Ge ol
	10	German. † Math. Physics † Mental Philosophy.	French. † Ment. Phil.	† Anglo-Saxon. (*e*) Physics [Mathematical]	French. Theoretical Chemistry (*e*)	
	11	Mental Philosophy. (*e*)	Mineralogy.	Mental Philosophy. (*e*)	Mineralogy	Physics [Mathematical].
	12		§ Physics [Experimental]	Rhetoric.	§ Physics [Experimental].	† Mathematical Physics.
	1		Hebrew.		Hebrew.	German.
Fourth Year.	9	† Geology.	Astronomy. (*a*) (*e*)	† Classics. Geology.	Astronomy. (*a*) (*e*)	† Geology. Classics.
	10	Geology.	† M. Phy. French. † M. Ph. German.	English Literature. (*e*)	†Math. Phys. † Mental Phil. German.	Geology.
	11	Classics.	Moral Phil.	Classics.	Moral Phil.	French. Anglo-Saxon and Early English.
	12	† English. Moral Phil.	† Physics [Experimental]	† Geology. † Math. Physics	§ Physics [Experimental].	German.
	1				Hebrew.	

(*a*) During First Term. (*b*) After Christmas. (*c*) For beginners entering 2nd Year. † For Candidates for Honours. (*d*) For Medical and Occasional Students.
* The Student may take at his option French or German in the First two years, or, if a Theological Student, Hebrew. § From Nov. 1st.
Classes at 1 P.M. may be changed to other hours.
(*e*) Additional Department.
Library open every day, 9 to 4. The Museum will be open as arranged by the Professor of Natural History.
Determinative Mineralogy, Wednesday, at 2 P.M.; Practical Chemistry, Monday and Thursday, at 2 P.M.

Faculty of Applied Science.

THE PRINCIPAL (*ex-officio*).

Professors :—GIRDWOOD.	Associate Professors :—
HARRINGTON.	DAWSON.
BOVEY.	MARKGRAF.
McLEOD.	JOHNSON.
Lecturer :—CHANDLER.	DAREY.
	MOYSE.

Dean of the Faculty :—HENRY T. BOVEY, M.A., C.E.

The Instruction in this Faculty is designed to afford a complete preliminary training of a Technical as well as Theoretical nature, to such Students as are preparing to enter any of the various branches of the Professions of Engineering and Surveying, or are destined to be engaged in Assaying, Practical Chemistry, and the higher forms of Manufacturing Art.

Four distinct Branches of study are established, viz :—

(1).—Civil Engineering, (2).—*Mechanical Engineering, (3).—Mining Engineering, (4).—Practical Chemistry.

Each of these extends over four, or, under certain conditions, three years, and is specially adapted to the prospective pursuits of the Student.

The Third and Fourth Years in the different Branches are each divided into an Ordinary and an Advanced Course as explained in Section III.

The Degrees conferred by the University upon such Undergraduates of this Department as shall fulfil the conditions and pass the Examination hereinafter stated, will be, in the first instance, "Bachelor of Applied Science," mention being made in the Diploma of the particular branch of study pursued; and, subsequently, the degree of "Master of Engineering" upon those who have pursued Branches 1, 2, or 3, and of "Master of Applied Science" upon those who have pursued Branch 4.

* See Note under § IX-II.

Examination for Land Surveyors:—Any Graduate in the Faculty of Applied Science, in the Course of Civil Engineering and Land Surveying, may have his term of apprenticeship shortened to one year for the profession of Land Surveyor in Quebec or Ontario, or for the profession of Dominion Land Surveyor. He must, however, pass the preliminary and final examinations before one of the Boards of Examiners. The former examination should be passed before entering the University, or during the First or Second Year of attendance.

Students in the Civil Engineering Course, who at the beginning of their Fourth Year give notice to the Faculty of their intention to prepare for the Examination for Dominion Topographical Surveyors, will receive special preparation for that Examination, more especially in Spherical and Practical Astronomy and Geodesy, and may be exempted from the Steam Engine and Hydraulics, or from the Designing of the Fourth Year.

Partial Students may be admitted to the lectures and examinations in the above special work.

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§ I. MATRICULATION AND ADMISSION.

1.—Candidates for Matriculation must present themselves for examination on the 17th of September, 1883. They may, however, be admitted at a later period of the Session, upon special application, if qualified to take their places in the classes in progress.

FOR ENTRANCE INTO THE FIRST YEAR, the subjects for examination will be :—

Mathematics—Arithmetic; Algebra, to end of Simple Equations; Euclid's Elements, Books I., II., III.

English.—Grammar (including Analysis), composition and the leading facts of the History of England.

Candidates in the School Examinations of the University, who have passed in Geometry, Algebra and English, may be received as matriculated Students in the First Year.

2.—*The full course will extend over a period of FOUR years, but Candidates may enter the SECOND year, and thus reduce the course to THREE years,* if competent to pass a satisfactory examination in the following subjects :—

Arithmetic.

Algebra.—To the end of Quadratics (as in Colenso's Algebra, Part I.).

Euclid.—Books I., II., III., IV., VI. and XI., and the definitions of Book V.

Plane Trigonometry.—Including solution of Triangles, and the use of Mathematical Tables.

Chemistry.—As in Nichol's Abridgment of Eliot and Storer's Manual.

English.—Grammar (including Analysis), composition and the leading facts of the History of England.

French or German.—(French as in De Fivas' Grammaire des Grammaires as far as Syntax, and easy translation. German as in Schmidt's German Guide, Part I., and easy translation.)

Candidates unable to pass in Chemistry, French or German, may be allowed by the Faculty to enter and take the First Year lectures on Chemistry and German.

Candidates who produce certificates of having already completed a portion of a course in some recognized School of Applied Science, may be admitted to an equivalent standing.

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§ II. MEDAL, EXHIBITIONS, AND PRIZES.

A Medal or Faculty Prize will be open for competition to *Fourth* Year Students of the three courses of Civil, Mechanical and Mining Engineering. Candidates must take a first-class general standing in their Ordinary course, and the Medal or prize will be awarded to the Student who stands *first* in the Hydraulics and Steam of the Advanced Course.

The following will be offered for competition at the opening of Session 1883-84:—

(1).—The Scott Exhibition of $66 (founded by the Caledonian Society of Montreal in commemoration of the Centenary of Sir Walter Scott), to Students entering the *Third* Year, the subjects of examination being:—

(*a*).—The Summer Report. (*b*).—Macaulay's History of England, Vol. I., Cap. I.; Sir Walter Scott's Lady of the Lake. (*c*).—Mechanism.

(2).—An Exhibition of $50, presented by A. T. Drummond, Esq., to Students entering the *Fourth* Year, the subject of examination being Applied Mechanics.

(3).—A Prize in books to the value of $25, presented by Leslie Skelton Esq., for the best Summer Report.

(4).—Two Prizes of $25 each, one to Students entering the *Fourth* Year, the other to Students entering the *Third* Year, the subjects of examination being the *Trigonometry*, *Analytical Geometry*, and *Calculus* of the Ordinary Course.

(5).—A Prize of $25, presented by S. Greenshields B.A., for the Mathematical subjects of the *Second* Year Matriculation, open to all Students entering the *Second* Year.

(6).—An Exhibition of $100, offered by J. H. Burland, B.A. Sc., to Students entering the *Second* Year, the subjects of examination being :—

(*a*). — Inorganic Chemistry. (*b*). — Elements of Organic Chemistry. (*c*).—Practical Chemistry.

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§ III. SPECIAL PROVISIONS.

1.—Partial Students may be admitted to the Professional Classes upon payment of special fees (§ VII).

2.—Undergraduates in Arts may, if allowed by the Faculty of Arts, be admitted to the Professional Classes in Practical Science on payment of the fees for these classes.

3.—Students in Applied Science may, by permission of the Faculty, take the Honour Classes in the Faculty of Arts.

4.—Students who have passed the Intermediate in Arts and not lower than the Second Class in Mathematics, have the privilege of entering the Second Year in Applied Science, and will be exempted from one of the departments in the Third and Fourth Years in Arts.

5.—Undergraduates in Arts of the Second or Third Years, or Graduates of any University, entering the Faculty of Applied Science, may, at the discretion of the Professors, be exempted from such lectures in that Faculty as they may have previously attended as Students in Arts, but must pass all the examinations.

§ IV. COURSES OF STUDY FOR SESSION 1883-84.

A. ORDINARY COURSE.

FIRST YEAR.

Civil Engineering.	Mechanical Engineering.	Mining Engineering.	Practical Chemistry.
Arithmetic. Euclid.	Arithmetic. Euclid.	Arithmetic. Euclid.	Arithmetic. Euclid.
Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.
Geometrical Conics.	Geometrical Conics.	Geometrical Conics.	Geometrical Conics.
Solid Geometry.	Solid Geometry.	Solid Geometry.	Solid Geometry.
Descriptive Geometry. (Optional.)	Descriptive Geometry. (Optional).	Descriptive Geometry. (Optional.)	Descriptive Geometry. (Optional.)
Freehand Drawing.	Freehand Drawing.	Freehand Drawing.	Freehand Drawing.
Chemistry.	Chemistry.	Chemistry.	Chemistry.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.

SECOND YEAR.

Mechanism.	Mechanism.	Practical Chemistry.	Practical Chemistry.
Materials.	Materials.	Mechanism.	
Surveying.	Surveying.	Surveying.	Descriptive Geometry.
Railway Work.	Railway Work.	Railway Work.	
Descriptive Geometry.	Descriptive Geometry.	Descriptive Geometry.	
Algebra.	Algebra.	Algebra.	
Analytical Geometry.	Analytical Geometry.	Analytical Geometry.	
Calculus.	Calculus.	Calculus.	
Mathematical Physics.	Mathematical Physics.	Mathematical Physics.	Mathematical Physics.
Experimental Physics.	Experimental Physics.	Experimental Physics.	Experimental Physics.
Mineralogy.	Mechanical Work.	Mineralogy.	Botany.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.

THIRD YEAR.

Applied Mechanics.	Applied Mechanics.	Applied Mechanics.	Practical Chemistry.
Materials.	Materials.	Materials.	Theoretical Chemistry.
Surveying.	Machinery & Millwork.	Mining.	Assaying.
Railway Work.	Railway Work.		Blowpipe Analysis.
Descriptive Geometry	Descriptive Geometry.	Practical Chemistry.	Mineralogy.
Analytical Geometry.	Analytical Geometry.	Blowpipe Analysis.	
Calculus.	Calculus.	Descriptive Geometry.	
Sphl. Trigonometry.		Analytical Geometry.	
Practical Astronomy.		Calculus.	
Mathematical Physics.	Mathematical Physics.	Mathematical Physics.	Mathematical Physics.
Experimental Physics.	Experimental Physics.	Experimental Physics.	Experimental Physics.
Geology.	Mechanical Work.	Geology & Mineralogy.	Zoology.
Modern Languages.†	Modern Languages.†	Modern Languages.†	Modern Languages.†

FOURTH YEAR.

Applied Mechanics.	Applied Mechanics.	Assaying.	Practical Chemistry.
	Machinery & Millwork.	Metallurgy.	Metallurgy.
	Metallurgy of Iron.	Geology (advanced).	Mineralogy.
Hydraulics.	Hydraulics.	Mineralogy (advanced).	Geology.
Railway Work.			
Thermodynamics.	Thermodynamics.	Thermodynamics.	
		Hydraulics.	
Graphical Statics.	Graphical Statics.	Graphical Statics.	
Steam Engine.	Steam Engine.	Steam Engine.	
Materials.	Materials.	Materials.	
Designs.	Designs.	Designs.	
Estimates. Spec'ns.	Estimates. Spec'ns.	Estimates. Spec'ns.	
Modern Languages.*	Modern Languages.*	Modern Languages.*	Modern Languages.*

(1) During the summer recess, the Students in the 2nd, 3rd and 4th years are to employ themselves in some practical work (Mechanical Engineering students in a work-shop) and they are also toprepare a report on such work, to be handed in not later than October 1st. Credit will be given for this Report (or Essay) in the subsequent Sessional Examinations.

(2) Students are not allowed to take subjects which do not form part of their course, without the sanction of the Faculty.

† English or French or German. * Modern languages not imperative in the Fourth Year

B. ADVANCED COURSE.

THIRD YEAR.—The Higher Mathematics, Mathematical Physics and Applied Mechanics.

FOURTH YEAR.—The Higher portions of Applied Mechanics.

All Students must take the Ordinary Course.

Students who have passed a creditable Examination in the Mathematical subjects of the Second Year may enter the Advanced Course of the Third Year, and may exempted from the Modern Languages of that Year.

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§ V. EXAMINATIONS.

1.—FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

There will be a Christmas Examination for Students of the First Year in all the Subjects, and for Students of the following years in Mathematics and in those Subjects which they take in the Faculty of Arts. A Sessional Examination will be held at the end of each year.

Candidates for the Degree of Bachelor of Applied Science are liable to be examined:—

1. In all the subjects of the *Fourth* Year.
2. In the Applied Mechanics of previous years.
3. In the Pure Mathematics of previous years.

Mining Students may substitute Mining and Mineralogy for the Applied Mechanics of No. 2.

Practical Chemistry Students are exempted from Nos. 2. and 3 of the above, but are liable for a special Examination in Theoretical Chemistry, Experimental Physics, and Biology.

The General Classification for the Degree Examination will be under two heads viz.:

1. Those who have received Honourable Mention, in order of merit.
2. Those who have satisfied the Examiners, in order of merit.

The degree Examination in Mathematics is to be held at the Christmas preceding the Final.

Certificates of merit may be given to such Students as take the highest places in the Degree Examinations.

Special Certificates may be given for proficiency in particular subjects.

Certificates may be given to Students who have passed the Special Courses added to the curriculum.

Students who take their Degree in one of the Courses provided by the Faculty of Applied Science may obtain credit in either of the remaining Courses by attending one or more subsequent Sessions, the necessary provision for which will be made.

II. FOR THE DEGREE OF MASTER OF ENGINEERING.

Candidates must be Bachelors of Applied Science of at least three years' standing, and must produce satisfactory certificates of having been engaged during that time upon *bonâ fide* work in either the Civil, Mechanical, or Mining Branch of Engineering.

They must pass with credit an Examination, which will extend over the general Theory and Practice of Engineering, in which papers will be set having special reference to that particular branch upon which they have been engaged during the three preceding years.

The Examination will be held once in each year in the second week of the month of December, and will be partly written and partly *viva voce*.

Notice of the intention of a Candidate to offer himself at any Examination for this degree must be sent in, together with the necessary certificates and fees, not less than two calendar months before each Examination is to be held.

III. FOR THE DEGREE OF MASTER OF APPLIED SCIENCE.

Candidates must be Bachelors of Applied Science of at least three years' standing, must present certificates of having been employed during that time in some branch of scientific work, and must pass with credit an Examination in the Theory and Practice of those branches of scientific work in which they may have been engaged. The other conditions as under the last heading.

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§ VI. ATTENDANCE AND CONDUCT.

The regulations under this head are in all respects the same as those in force for Undergraduates in Arts.

§ VII. LIBRARY AND MUSEUM.

Students in this Department have the same privileges with reference to the Library and Museum as Undergraduates in Arts.

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§ VIII. FEES.

In the Course of Civil Engineering.—$45; Library, $4. In all $49 for each Session.

In the Course of Mechanical Engineering.—$45; Library, $4. In all $49 for each Session.

In the Course of Mining Engineering.—1st Year, $45; 2nd, 3rd and 4th Years, $55; Library, $4. In all $49 to $59 for each Session.

In the Course of Chemistry.—1st Year, $45; 2nd, 3rd and 4th Years, $55, Library, $4. In all $49 to $59 for each Session.

Matriculation Fee, for the First Year (to be paid in the year of entrance only), $4; for the Second Year (exigible from Students who enter in the Second Year, and also from those who have failed in the First Year, and re-entered the Second Year on Examination) $6.

Fee for Degree of Bachelor of Applied Science.—$10.

Fee for Degree of Master of Engineering or Master of Applied Science.—$25.

The fees must be paid to the Secretary, and the tickets shown to the Dean within a fortnight after the commencement of attendance in each session. In case of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty and on payment of a fine of $2.

The B. A. Sc. fee must be paid before the Examination.

Laboratory Students are required to purchase their own chemicals, &c. The larger articles of apparatus will be supplied by the Laboratory, the Students paying $6 per Session for their use, and being responsible for breakage.

Partial Students may be admitted to the Professional Classes in any year, by payment of the ordinary fees for that year, or they may attend the lectures in any subject by payment of a fee of $10 except in the case of Chemistry, for which a fee of $20 is required.

Students taking Blowpipe Analysis, when it does not form part of their course, are required to pay a fee of $5.

Partial Students may attend the course of Instruction in Meteorology on paying a fee of $5.

§ IX. COURSES OF LECTURES.

I. CIVIL ENGINEERING AND APPLIED MECHANICS.

Professor:—HENRY T. BOVEY, M.A., C.E.

Civil Engineering.

The course of instruction in Civil Engineering will include the following:—Mechanism, Earthwork, Masonry, Carpentry, Structures of Timber, Stone and Iron, the Construction of Common Roads, Rail Roads, Bridges, Viaducts, Tunnels, Canals, River, Harbour and Sea Works, Drainage Works, Lighthouses, Works connected with Irrigation and Water Supply, &c.

The subject for Session 1883–84 will be Railway-Work.

N.B.—*Students of the Second Year are not required to pass the examination in this subject.*

Applied Mechanics.

The subject of Applied Mechanics will be treated under two heads:—

(*a*). The Strength of Materials, embracing a study of Work, Inertia, Energy and Entropy, the Strength, Stiffness, and Resilience of Materials, Beams or Girders, Pillars, Shafts, Structures (*simple and complex*), Earthwork, Retaining Walls and Arches.

(*b*). Hydraulics, comprising the Theory of Hydrostatics and Hydrodynamics, the Flow of Liquids through Orifices, Pipes and Canals, the Action of a Stream on inclined or curved Vanes (*Fixed or Revolving*) Hydraulic Machines (*Pressure Engine, Vertical Water Wheels, Turbines, Centrifugal Pumps*), Pneumatics.

Thermo-Dynamics and the Steam-Engine.

The course of instruction in this Department will embrace:—The General Description of the Steam Engine, the Theory of Heat, the Application of Heat to Thermal Machines, the Production of Heat and Steam, and also:—

(*a*). The movement and distribution of Steam, including the action of Steam in a Cylinder, the methods and regulation of the distribution of Steam, Systems of Cut-off, the general disposition of Cylinders, Condensers, &c.

(*b*). The modes of transmission and a consideration of certain special machines.

(*c*). The construction of an Engine, under which head will be considered Rivets, Bolts, Screws, Sockets, Keys, Cylinders, Pistons, Organs of Distribution, Organs of Transmission.

(*d*). The construction of Special Machines.

Designs, Estimates, &c.

Engineering Students will also prepare designs, specifications, and estimates of such works as are usually undertaken by the Engineer.

Each Student works independently, under the personal supervision of the Professor of Engineering, and makes such drawings and calculations as would be needed were the structure designed to be actually carried out.

* II. MECHANICAL ENGINEERING.

Professors BOVEY AND MCLEOD.

Mechanism.

The lectures on Mechanism will treat of:—The object and structure of a machine and the parts of a machine, bearings, connections (*simple and complex*), elementary combinations and their classification, shewing the various modifications of motion (*with constant or variable velocity ratios*), engagements (*teeth of wheels, &c.*), adjustments.

Theory of Machines.

This Branch will comprise:—

(*a*). *The Transmission of Work*, including the measurement of work, the efficiency of machines, dynamical friction, viscosity, and the methods of transmitting work (*by continuous rotation, oscillation, belts, water, and compressed air*).

(*b*). *The Modification of Work and Stores of Energy*, embracing a study of the actual energy of moving pieces, springs and weights.

(*c*). *Governing and Controlling Machines*, including a consideration of uniform effort, variable resistance, machines driven by fluid pressure, differential governors.

(*d*) *Balancing Machinery.*

Mechanical Work.

A course of lectures will be given on the following specific Departments of Mechanical Engineering, and will treat entirely of the principles and results of actual practice:—The different classes of machinery, Belts, Gearing, Forging, Hammers (*Trip, Crank, Steam and Compound*), the Tempering of Steel, Tools, Vice-work, Fitting and Finishing, Lathes and Lathe work, Planing, Slotting and Shaping Machines, Boring and Drilling, Milling and Milling tools, Screw-cutting, the Slide-valve, Standard Measures, Gauging Implements, and calculations respecting the speed of Wheels, Pullies, &c.

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* Unless sufficient funds are forthcoming to warrant the continuance of this Course no Mechanical Engineering Students will be received into the First Year after the present Session.

III. MINING ENGINEERING.

Professor:—B. J. HARRINGTON, B.A., PH.D.

The object of this course is to give Students a knowledge of the characters and mode of occurrence of various economic minerals, together with the methods employed for their extraction and subsequent treatment.

The lectures on Mining are given during the Third Year, and among the subjects taken up the following may be mentioned:—Blasting and the nature and use of different Explosives, Quarrying, Hydraulic Mining, Boring, the Sinking, Timbering and Tubbing of Shafts, Driving and Timbering of Levels, Underground Conveyance and Hoisting, Drainage and Pumping, Lighting and Ventilation of Mines, special methods of Exploitation employed in the working of Metalliferous Deposits or of Coal Seams, &c. During this year, also, instruction is given in Blowpipe Analysis, the object of which is to enable Students by means of the blowpipe and a few simple re-agents to detect the nature of different Minerals or Ores. On account of the small quantity of apparatus required, and the rapidity with which accurate results may be arrived at, a knowledge of this subject will be found most useful to those engaged in geological or other field-work.

In the Fourth Year a short course of lectures on Metallurgy is given, and assays aremade of various Ores, Fuels, &c.

NOTE.—The lectures on Mining and Metallurgy are illustrated by a series of Models.

IV. DESCRIPTIVE GEOMETRY AND SURVEYING.

Professor:—C. H. MCLEOD, MA.E.

Descriptive Geometry.

SECOND YEAR.—(1).—Linear Drawing. (2).—Orthographic projection, including penetrations, developments, sections, etc.

THIRD YEAR.—(1).—Orthographic projection (continued). Tangent planes and normals. Curved surfaces. Graphical determination of spherical triangles. (2).—Spherical projections, including the construction of maps. (3).—Axometric projection. Isometric projection. (4).—Shades and shadows. (5).—Mathematical perspective. Perspective of shades and shadows.

Surveying.

This course is designed to qualify the student for admission to the practice of Provincial and Dominion Land Surveying. It also affords a practical and theoretical training in field engineering.

SECOND YEAR.—Chain Surveying, Compass Surveying. The use and adjustment of the Transit, Theodolite, Level (Dumpy, Y, and other forms), Sextant, Aneroid Barometer, Plane-table and other field instruments. Contour Surveying. Underground Surveying. Plotting. Practical operations in the field. Calculating areas.

THIRD YEAR.—Topography. Methods of Setting out Work. Curves. Indirect and Barometric Levelling. Hydrographic Surveying. Spherical Surveying. Practical operations in the field.

NOTE.—The field work is carried out under the personal supervision of the Professor, and is as follows:—(*a*) a chain survey, (*b*) an angular survey, (*c*) a contour survey, (*d*) the location of a line of road, including preliminary surveys, ranging curves, levelling and setting out the work, (*e*) an hydrographic survey. Each student is required to make field notes, and from these to plot all plans and sections required in connection with the above.

V. CHEMISTRY.

Lecturer:—B. J. HARRINGTON, B.A., PH.D.

A course of lectures, illustrated by experiments, is given to all students of the First Year, on the preparation and properties of the non-metallic and metallic Elements and many of their Compounds, and on the elementary principles of Organic Chemistry. Students taking these lectures must also devote at least one afternoon a week to practical work in the laboratory.

In the Second and Third Years additional instruction will be given to students of the Mining and Chemistry Courses in practical work. Students in the Third Year of the Chemistry course will also attend one hour a week in Theoretical Chemistry.

VI. PRACTICAL CHEMISTRY.

Professor:—GILBERT P. GIRDWOOD, M.D.

This course will be conducted in the Laboratory of the Medical Faculty, and will be specially designed for Chemistry Students of the Third and Fourth Years. It will include instruction in the method of Qualitative and Quantitative Analysis of Inorganic and Organic Bodies, Fractional Distillation, determination of Boiling Points, Melting Points, &c.

VII. GEOLOGY.

Professor:—J. W. DAWSON, LL.D., F.R.S. (Logan Professor of Geology).
Assistant Professor:—B. J. HARRINGTON, B.A., PH.D.

SECOND YEAR.—A preliminary Course in Mineralogy and Lithology.

THIRD YEAR.—Physical and Chronological Geology and Palæontology, Geology of Canada, Methods of Geological Exploration.

FOURTH YEAR.—(Mining Students only).—Special Studies in Mineralogy and Lithology, Advanced Course in General Geology and Palæontology, Geology of Canada, Practical Geology and Field-work.

VIII. MATHEMATICS AND MATHEMATICAL PHYSICS.

Lecturer :—G. H. CHANDLER, M.A.

The lectures in this course are specially designed to meet the requirements of Students of Applied Science ; those in Mechanics being introductory to Applied Mechanics. The subjects are as follows :—

FIRST YEAR.—(1) Euclid, six books. (2) Loci, Transversals, &c. (3) Algebra, to Progressions. (4) Plane Trigonometry and the use of Mathematical Tables. (5) Elements of Solid Geometry. (6) Geometrical Conic Sections.

SECOND YEAR.—(1) Algebra, continued. (2) Analytical Geometry. (3) Differential and Integral Calculus. (4) Mechanics.

THIRD YEAR.—(1) Mechanics, continued. (2) Spherical Trigonometry. (3) Spherical and Practical Astronomy. (4) Revision and continuation of Analytical Geometry and Calculus with applications to Mechanics, &c.

IX. EXPERIMENTAL PHYSICS.

Professor :—ALEXANDER JOHNSON, LL.D. (Peter Redpath Professor of Natural Philosophy).

Students in this Faculty are required to take the course in Experimental Physics provided by the Faculty of Arts.

The subjects for the Session 1882–83 are Light and Heat.

X. ENGLISH LANGUAGE AND LITERATURE.

Professor :—CHARLES E. MOYSE, B.A. (Molson Professor of English Language and Literature).

FIRST YEAR.—English Language and Literature.

SECOND YEAR.—A special course on English Composition.

THIRD YEAR.—A special course on English Composition.

XI. FRENCH OR GERMAN.

French :—Professor P. J. DAREY, M.A., B.C.L.

German :—Professor C. F. A. MARKGRAF, M.A.

Students of this Faculty are required to take the course in one of these languages provided by the Faculty of Arts.

XII. METEOROLOGY.

Instruction in Meteorological Observations will be given in the Observatory at hours to suit the convenience of Senior Students.

Certificates will be granted to those Students who pass a satisfactory examinal tion on the construction and use of Meteorological Instruments, and on the generafacts of Meteorology.

N.B.—Students of the Second, Third and Fourth Years will be required to answer satisfactorily a weekly paper on such subjects of the course as shall be determined by the Faculty.

§ X. TEXT-BOOKS.

Civil Engineering and Applied Mechanics :—Rankine, *Collignon, *Weisbach, Bovey, Van Buren, Reuleaux.

Machinery, etc. :—Goodeve (new edition), *Willis, Rankine, Knight, Rose, Shelley, *Fairbairn, Unwin.

Thermodynamics —Maxwell, *Clausius (tr. by Browne), Rontgen (tr. by DuBois).

Steam Engine :—Rankine, Rigg, Marks.

Steam Boiler :—Wilson.

Moulding and Founding :—Overman.

Materials :—Notes on Building Construction (Rivington pub.), *Gilmore, Thurston.

Descriptive Geometry :—Millar's Descriptive Geometry.

Surveying :—Gillespie's Land Surveying.

Geology :—Dana's Geology, Dana's Mineralogy, Dawson's Handbook of Zoology and Lecture Notes on Geology, Nicholson's Palæontology, Geological Survey Reports, Dawson's Acadian Geology.

Blowpipe Analysis :—Brush's Determinative Mineralogy and Blowpipe.

Chemistry :— Nichol's Abridgment of Eliot and Storer's Manual of Chemistry. Fresenius' Manuals of Qualitative and Quantitative Analysis.

Assaying :—Rickett's Notes on Assaying, Chapman's Assay Notes.

Mathematics :—Todhunter's Euclid, Colenso's Algebra (Part 1.), Hamblin Smith's Trigonometry, Wilson's Solid Geometry and Conic Sections, Briggs's Analytical Geometry, Peck's Calculus, Goodeve's Principles of Mechanics, Chambers's Practical Mathematics.

TABLE OF LECTURES.

Years.	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
FIRST YEAR.	9		French.		Mathematics. French.	Mathematics.
	10	Mathematics.	Mathematics.	English.		
	11	English.	French.	French.	French.	English.
	12	Chemistry.	German.	Mathematics.	German.	Chemistry.
					Prac. Chem.	
	3				Do	
					Do	

* *Books of Reference.*

TABLE OF LECTURES (*Continued.*)

Years.	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
SECOND YEAR.	9	French.	Materials.	French.	Railway Work	French. / German.
	10	Surveying.	Botany.†	Surveying.	Botany.† / Mathematics.	German.
	11	Mathematics.	Mineralogy.	Math. Physics.	Mineralogy.	Math. Physics
	12	German.	Exp. Physics.	German.	Exp. Physics.	English.
	2	Mechl. Work / Prac. Chem.	Mechanism.		Drawing. / Prac. Chem. / Mech. Work.	Mechanism.
	3	Drawing.	Drawing.		Do	Drawing.
	4	Do			Do	Do
THIRD YEAR.	9	App. Mech.	Materials.	Geology / Machinery.	Railway Work.	German*.
	10	Geology.	French. German.	Mathematics.	French & Ger. Theor. Chem.	Geology. Machinery.
	11	App. Mech. (Advanced).		German.		
	12	Mat. Physics.	Exp. Physics.	German.	Exp. Physics.	Math. Physics.
	2	Mech. Work / Prac. Chem. / Drawing.	Drawing.	Blowpipe. / Analysis.	Prac. Chem. / Drawing. / Mech. Work.	Drawing.
	3	Surveying.	Drawing. / Mining.		Drawing. Surveying.	Do
	4	Drawing.	App. Mech.		Do	App. Mech.
FOURTH YEAR.	9	Geology.*	Materials.	Designing.	Railway Work.	Geology.*
	10	Construction.	Designing.	Do	Construction.	
	11	App. Mech. (Advanced).	Do	Do	App. Mech. (Advanced.)	
	12	App. Mech. (Advanced.)	Do	Geology.*	App. Mech.	
	2	Assaying. / Designing.	Hydraulics.		Assaying. / Designing.	Hydraulics.
	3	Do	Steam.		Do	Steam.
	4	Do	App. Mech.	Metallurgy.*	Do	App. Mech.

* For Mining Students only.

Field work for Students of the 2nd Year on Mondays, Tuesdays, Wednesdays and Thursdays; for Students of the Third Year on Mondays, Wednesdays, and Thursdays, during the months of September and October.

† For Practical Chemistry Students.

Faculty of Medicine.

THE PRINCIPAL (ex-officio).

Professors :—	Professors :—
WRIGHT,	RODDICK,
HOWARD,	OSLER,
MCCALLUM,	GARDNER,
CRAIK,	SHEPHERD,
FENWICK,	BULLER,
DRAKE,	BROWNE,
GIRDWOOD,	STEWART,
ROSS,	WILKINS.

Dean.—R. P. HOWARD, M.D.

Registrar.—W. OSLER, M.D.

Demonstrator.—R. L. MACDONNELL, B.A., M.D.

The fifty-first session of the Medical Faculty of McGill University will be opened on Monday, October 1st, 1883, by an introductory lecture at 8 p.m. The regular lectures will begin on October 2nd at the hours specified in the time table, and will be continued six months.

The Medical School of McGill University was founded in 1824 as the Medical Institution by Drs. Stephenson, Holmes, Robertson and Caldwell. In 1829 the Medical Institution became the Medical Faculty of McGill College. There were no sessions during the political troubles from 1836 to 1839, and it is owing to this gap that the present is the 51st session of the Faculty. In reality this is the 55th session of the school, which is the direct continuation of the Medical Institution.

It affords the Faculty much pleasure to be able to state that in all departments the teaching is being worked up to the best possible standards. Their ambition is to be able to offer to the young men of this Dominion a thorough medical education in all its branches equal to the very best afforded by European Schools.

The Medical College, a large and substantial building situated within the University Grounds, contains two spacious class rooms, Student's waiting-room, Library, Museum, Laboratories, together with a large and well-furnished Dissecting-room.

The class tickets for the various courses are accepted as qualifying candidates for examination before the various Colleges and licensing bodies of Great Britain and Ireland, and the College of Physicians and Surgeons of Ontario.

To meet the circumstances of the General Practitioners in British North America, where there is no division of the profession into Physicians and Surgeons exclusively, the degree awarded upon graduation is that of "Doctor of Medicine and Master of Surgery," in accordance with the general nature and character of the curriculum, as fully specified hereafter. The degree is received by the College of Physicians and Surgeons of the Province of Quebec.

I.

MATRICULATION.

It is very important that intending Students should bear in mind the following: (1) *That if natives of Ontario, and if they wish to obtain the license of the Medical Board of that Province, they must pass the Preliminary Examination prescribed by that Board. The attention of Ontario students is particularly directed to the fact, that the New Medical Bill before the Imperial Parliament will allow the various colonies to make what regulations they please regarding registration. When this Bill becomes law, Ontario Students can no longer evade the enactments of the Council if they wish to practice in that province.* (2) *If natives of the Province of Quebec, they must pass the Matriculation Examination of the Quebec Medical Board.*

These examinations are accepted by the University, and a Student who has passed either of them is admitted to study without further examination.

(3) *Natives of the Maritime Provinces and of the United States, if they have not already passed the Matriculation Examination of a recognized University, must present themselves for the University Matriculation.*

(*a*) *University Matriculation Examination.*

This examination is the same as that recommended by the Medical Council of Great Britain. Examinations in conformity therewith will be held the last Friday and Saturday in March and the first Friday and Saturday in October of each year. Applications may be made to the Registrar of the Faculty till the evening of the previous day. The requirements of the standard for Matriculation are :—(1) English Language, including Grammar and Composition.* (2) English History. (3) Modern Geography. (4) Latin, including Translation from the original and Grammar. (5) Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof. (6) Elementary Mechanics of Solids and Fluids, comprising the elements of Statics, Dynamics and Hydrostatics. (7) One of the following optional subjects;—(*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry.

* The ability of the candidate will be fully tested in the following :—" (1) To write sentences in English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use."

TEXT-BOOKS.—Latin,—Cicero, Orations 1 and 2 against Cataline; or Virgil, Æneid, Bk. I.

GREEK.—Xenophon, Anabasis, Bk. I., or equivalent.

FRENCH.—Charles XII., Two Books.

NATURAL PHILOSOPHY.—Ganot's Physics.

Graduates in Arts of recognized Universities are not required to submit to the Matriculation Examination, and a certificate of having passed the Examination before the College of Physicians and Surgeons of Ontario or of Quebec will be accepted by this University.

(b) Matriculation Examination of College of Physicians and Surgeons of the Province of Quebec.

The subjects of examination are as follows :—

Compulsory Subjects :—English, French, Latin, Arithmetic, Algebra, Euclid, History, Geography, Belles-Lettres.

Optional Subjects :—Candidates can select any one of the following :—Greek, Natural and Moral Philosophy.

The Examinations will be held upon the 20th of September, 1883, at Quebec, and on the 8th of May, 1884, at Montreal. Applications to be made to Dr. F. W. Campbell, Montreal, or Dr. Belleau, Quebec.

Examination Fee, ten dollars. Should the candidate be unsuccessful, one half of the fee will be returned.

Of the four years study *after* having passed the Matriculation Examination, three six months' sessions, at least, must be attended at a University, College, or Incorporated School of Medicine, recognized by the "Provincial Medical Board." The first session must be attended during the year immediately succeeding the Matriculation Examination, and the final session must be in the 4th year.

(c) Matriculation Examination of the College of Physicians and Surgeons of the Province of Ontario.

The following are the latest regulations of the Ontario Medical Board respecting this Examination :

"On and after July 1st, 1881, every one desirous of being registered as a Matriculated Medical Student in the Register of this College, except as hereinafter provided, must present to the Registrar the Official Certificate of having passed the High School Intermediate Examination, with Latin included, whereupon he shall be entitled to be so registered upon the payment of twenty dollars, and giving proof of his identity.

The said Examination to embrace the following subjects :

Compulsory :

a. Arithmetic, Algebra and Euclid.

b. English Grammar, Composition and Dictation.

c. History, Geography, and English Literature.

d. Natural Philosophy, Chemistry and Book-keeping.

e. Latin.

And one of the following :—

Optional:

a. GREEK.

b. FRENCH.

c. GERMAN.

Graduates in Arts, or Students having Matriculated in Arts in any University in Her Majesty's Dominions, are not required to pass this Examination, but may register their names with the Registrar of the College, upon giving satisfactory evidence of their qualifications, and upon paying (after July 1st, 1881) the fee of Twenty Dollars."

II.

ENREGISTRATION AND PAYMENT OF FEES.

The following are the University Regulations:

All Students desirous of attending the Medical Lectures shall, at the commencement of each Session, enrol their names and residences in the Register of the Medical Faculty, and procure from the Registrar a ticket of Enregistration, for which each Student shall pay a fee of $5; excepting in the Clinical Classes, in which Enregistration for Students of other Schools shall not be compulsory.

The said Register shall be closed on the last day of October in each year. The fees are payable to, and all class tickets will be issued by, the Registrar, and must be paid, (except under special circumstances) at the time of enregistration.

Enregistration in the Summer Session is compulsory upon all Students, whether attending one or more of the Classes.

III.

COURSES OF LECTURES.

1 Anatomy.—(Prof. Shepherd.)—Anatomy will be taught in the most practical manner possible, and its relation to Medicine and Surgery will be fully dwelt on. The lectures will be illustrated by the fresh subject, moist and dry preparations, sections, models and plates.

2 Practical Anatomy—[Drs. MacDonnell, Sutherland and R. J. B. Howard. —Special attention is devoted to this important branch, the teaching being similar to that of the best European schools. The Dissecting-Room is open from 8 a.m. to 10 p.m.; the Demonstrators' hours are from 10 to 12 a.m., and 8 to 10 p.m. Special Demonstrations on the Brain, Thorax, Abdomen, Bones, etc., are frequently given. Every Student must be examined *at least* three times on each part dissected, and if the examinations are satisfactory a certificate is given. Prizes are awarded at the end of the Session for the best examination on the fresh subject. Material provided under cost.

3 Chemistry.—[Prof. Girdwood.]—Inorganic Chemistry is fully treated: a large portion of the course is devoted to Organic Chemistry and its relations to

Physiology. The branches of Physics bearing upon or connected with Chemistry also engage the attention of the Class. For experimental illustration, abundant apparatus is possessed by the Professor, among which may be enumerated, a powerful Air Pump—Oxy-Hydrogen Microscope—Polariscope—extensive series of Models of Crystals, Electrical and Galvanic apparatus, Steam Engine, &c., &c.

4 Practical Chemistry.—[Prof. Girdwood.]—Thorough instructionis given in the different departments of Practical Chemistry in the Laboratory of the Faculty, under the personal supervision of the Professor. The course includes blow-pipe manipulations, qualitative and quantitative analysis, toxicological investigations, &c., &c. This class may be taken in the Summer Session.

5 Institutes of Medicine.—[Prof. Osler and Dr. Mills.]—Embraced in this course are the following classes:—

(*a*) **Physiology**, comprising.

(1) A full course of didactic lectures upon the structure and functions of the various organs of the body in health. The lectures are illustrated by fresh preparations, diagrams, plates and models, and by experiments with apparatus.

(2) Practical Physiology:—In addition to the demonstrations in the Lecture-room, the senior members of the class have an opportunity of attending the following. (*a*) Physiological chemistry (weekly until Christmas), in which class each student works over the essentials of the chemistry of digestion, the secretions and the urine. (*b*) A special demonstration course in Experimental Physiology (weekly, after Christmas) with the use of apparatus. Candidates for the Morrice scholarship must take these classes.

(3) Histology.—1st. Normal. A bi-weekly course of lessons throughout the session. Microscopes, re-agents and material provided. It comprises thorough instruction in the use of the Microscope and the preparation of the tissues, each Student preparing for himself during the course a cabinet of 100 or more specimens. 2nd. Pathological, including the Microscope in relation to Practical medicine. Bi weekly in the Summer Session.

(*b*) **Pathology**, comprising,

(1) Twenty lectures on General Pathology to the students of the 3rd year.

(2) Pathological Demonstrations—weekly—Saturday, 10 a.m. This course is based upon, and conducted, as far as possible, in the same way as that of Prof. Virchow, at the Berlin Pathological Institute. Specimens of all kinds are collected throughout the week, kept until Saturday, and then brought before the class, when practical comments are made upon them.

(3) Instruction in Post-Mortems—The Autopsy Room of the General Hospital is in charge of the Professor, and the post-mortems are performed by the Students in rotation, under his supervision. System and thoroughness in inspection are insisted upon, the method followed being that of Virchow. As far as possible, attention is drawn to the Medical Anatomy of the thoracic and abdominal organs. In connection with this class, aided by the Professor of Medical Jurisprudence, two Coroners' Inquests will be conducted during the Session before the class, and the Medico-legal aspects of post-mortems dwelt upon.

6 Materia Medica.—[Prof. Stewart.]—

7 Theory and Practice of Medicine.—[Prof. Howard.]—While the lectures on this subject are mainly devoted to Special Pathology and Therapeutics, the department of General Pathology in this University being included in the Institutes of Medicine, no opportunity is lost of illustrating and explaining the *general* laws of disease. With the exception of certain affections seldom or never observed in this country, all the important diseases of the body, not described from the chairs of Surgery and Obstetrics, are discussed, and their Pathological Anatomy illustrated by the large collection of morbid preparations in the University Museum, and by fresh specimens contributed by the Demonstrator of Morbid Anatomy.

The College possesses an extensive series of Anatomical plates illustrative of the histological and anatomical appearances of disease, and the wards of the General Hospital afford the lecturer ample opportunities to refer to living examples of very many of the maladies he describes, and to give the results of treatment.

8 Clinical Medicine.—[Prof. Ross.]—Attendance is given in the Medical Wards of the Montreal General Hospital on three days of every week with the 3rd year students and three days with the 4th year men. Accurate reports of all cases are kept by duly appointed clinical clerks, and are systematically read before the class. Instruction is given by the bedside, and special induce ments are offered to every pupil to take part in the physical examination of patients. The mode of conducting investigations, the use of the microscope, the value of the thermometer and ophthalmoscope, etc., in Medical Diagnosis, are all explained and illustrated. Senior Students are called upon in rotation to examine new cases before the class, and to be examined thereon as to their general knowledge. In addition, one weekly Clinical Lecture is delivered, bearing upon some case or cases of importance which may happen to be under observation at the time. Special attention is directed to Medical Anatomy, and candidates for the degree will be examined thereon.

9 Surgery.—[Prof. Fenwick].—The lectures on this subject are divided into, 1st. Surgical Pathology, illustrated by a large collection of preparations from the College Museum, also specimens as they are obtained from cases under observation at the Hospital, and contributed to that collection by the Hospital pathologist and from private sources. The second part of the course is devoted to the practice of Surgery, in which attention is drawn to cases which have been observed by the class during the previous summer session. The various surgical apparatus are exhibited, and their uses and application explained. Surgical Anatomy and Operative Surgery forms a special department of this course, and Quain's and Maclise's plates are used in illustration.

10 Clinical Surgery.—[Prof. Roddick.]—This course is eminently practical, consisting of bedside instruction and lectures delivered weekly, illustrative of Surgical cases actually present in the wards of the General Hospital. The class is separated into junior and senior divisions which are taken charge of by the Teacher on alternate days, when the reports of the Clinical clerks are read and criticized, and fresh cases are examined by the senior Students. The Surgical dressings are, as much as possible, reserved for these occasions, so as to give all present an

opportunity of participating in the application of splints to fractures, dressing of wounds, minor operations, etc. Major operations are performed in the theatre attached to the Hospital, which is so constructed that the most distant can obtain a fair view of the operation. All of the recently invented appliances for the treatment of Surgical disease have been introduced into the Hospital.

11 Midwifery.—[Prof. Browne.]—This course will embrace (1) Lectures on the principles and practice of the obstetric art, illustrated by diagrams, fresh and preserved specimens, the artificial pelvis, &c.; (2) Bedside instruction in the Lying-in Hospital, including the management and after-treatment of cases; (3) A complete course on obstetric operations with the cadaver and preserved fœtuses, in which each final student will perform the various manipulations and operations (4) The Disease of Infancy.

12 Gynæcology.—(Prof. Gardner.)—The course on this subject will comprise two lectures a week throughout the session. The anatomy and physiology of the parts concerned will be first discussed. Then the various methods of examination will be fully described, the necessary instruments exhibited and their uses explained. After this the diseases peculiar to the sex will be considered as fully as time will permit in the following order:—Disorders of Menstruation; Leucorrhœa, its causes and treatment; Pelvic Cellulitis and Peritonitis; Lacerations of the Cervix Uteri and Perineum; Urinary and Fæcal Fistulæ; Inflammations of the Uterus; Displacements of the Uterus; Tumours of the Uterus; Diseases of the Ovaries.

The lectures will be illustrated as fully as possible by drawings and morbid specimens. The gynæcological clinic of the University Dispensary furnishes the Professor with ample material to illustrate the subjects considered in the didactic lectures.

13 Medical Jurisprudence.—[Prof. Wilkins.]—This course includes *Insanity*, the subject being treated of in its Medical as well as Medico-legal aspects. Special attention is devoted to the subject of blood stains, the Clinical, Microscopic and Spectroscopical tests for which are fully described and shown to the class. The various spectra of blood in its different conditions are shown by Zeiss' Micro-spectroscope, so well adapted for showing the reactions with exceedingly minute quantities of suspected material. Recent researches in the diagnosis of human from animal blood are alluded to. In addition to the other subjects usually included in a course of this kind, Toxicology is taken up. The modes of action of poisons, general evidence of poisoning and classification of poisons are first treated of, after which the more common poisons are described with reference to symptoms, post-mortem appearances, and chemical tests. The post-mortem appearances are illustrated by plates, and the tests are shown to the Class.

14 Hygiene and Public Health.—[Dr. MacDonnell.]—A three months' course of Lectures will be delivered on this subject, the attendance upon which is now compulsory. The course comprises lectures on Drinking water and Public water supplies; conditions of Soil and Water as affecting health, including Drainage and the various methods for the removal of Excreta; the Atmosphere, including Heating and Ventilation; Individual Hygiene, comprising the subjects of Food and

Drink ; Physical Exercise and Bathing ; discussion of the respective merits of the various forms of each, precautions, contraindications, etc. Village Sanitary Associations ; Mutual Protective Sanitary Associations for cities.

15 Ophthalmology and Otology.—[Dr. Buller.]—Will include a course of lectures on diseases of the Eye and the Ear, both Didactic and Clinical. In the former the general principles of diagnosis and treatment will be dealt with ; in the latter, cases illustrative of the typical forms of ordinary diseases of these organs will be exhibited and explained to the class, and afterwards placed under the special care of gentlemen who may show themselves competent to take charge of them. A Course of Operations on the Cadaver will be open to such Students as may wish to avail themselves of the same.

16 Botany and Zoology.—[Prof. Penhallow.]—The course in Botany is illustrated by specimens, diagrams, models, and the microscope. Students have access without any additional fee to the lectures in Zoology in the Faculty of Arts, and to the Natural History Museum of the University and the Museum of the Natural History Society of Montreal.

Students have an opportunity of attending a course of eight lectures on the Parasitic Diseases of Man and the Domestic Animals. (Prof. Osler.) The life history and development of the Entozoa, together with the diseases caused by them, are fully considered. The lectures are illustrated by a series of beautiful diagrams, and by fresh and prepared specimens.

The following are extracts from the University Regulations with respect to the courses of Lectures :

1st. Each Professor shall deliver at least five Lectures during the week, except in the Medical Jurisprudence and Botany, if extended through six months, in which case three Lectures a week will suffice.

2nd. Every Lecture shall be of one hour's duration.

3rd. Every Professor shall occasionally examine his class upon the subjects treated of in his preceding Lectures, and every such examination shall be considered a Lecture.

4th. A roll of the names of the Students attending each class shall be called from time to time.

IV.

QUALIFICATIONS FOR THE DEGREE.

The following are extracts from the Regulations respecting the qualifications of Candidates for the Degree in Medicine :

1st. No one shall be admitted to the Degree of Doctor of Medicine and Master of Surgery, who shall not either :—1st, have attended Lectures for a period of at least four six months' sessions in this University, or some other University, College, or School of Medicine, approved of by this University ; or, 2ndly, have furnished proof that he has studied medicine during at least four years, and during that time has attended Lectures for a period of at least three six

months' Sessions, including the 1st and 4th, either in this University, or some other University, College, or School of Medicine approved of by this University.

2nd. Candidates for the Final Examination shall furnish Testimonials of attendance on the following branches of Medical Education, viz :—

Anatomy. *Chemistry.* *Materia Medica and Pharmacy.* *Institutes of Medicine.* *Principles and Practice of Surgery.* *Midwifery and Diseases of Women and Children.* *Theory and Practice of Medicine.* *Practical Anatomy.* *Clinical Medicine.* *Clinical Surgery.*	*Of which two Courses will be required of six months' duration.*
Medical Jurisprudence.	*Of which one Course of six months, or two Courses of three months will be required.*
Practical Chemistry. *Botany or Zoology.* *Hygiene.*	*Of which one Course will be required of three months' duration.*

And a Course of not less than twenty-five Demonstrations upon Microscopic Anatomy, Physiology, and Pathology.

Provided, however, that Testimonials equivalent to, though not precisely the same, as those above stated may be presented and accepted.

3rd. The Candidate must give proof by ticket of having attended during eighteen months the practice of the Montreal General Hospital, or that of some other Hospital approved of by this University, and have compounded medicines for six months.

4th. He must also give proof by ticket of having attended for at least six months the practice of the University or other Lying-in-Hospital approved of by this University, and of having attended at least six cases of accouchement.

5th. No one shall be permitted to become a Candidate for examination who shall not have attended at least one Session of this University, and one full course of all the branches included in its curriculum.

6th. Courses of less length than the above will only be received for the time over which they have extended.

7th. Every Candidate for the Degree must, on or before the fifteenth of February, present to the Dean of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and must at the same time deliver to the Dean of the Faculty the following Certificate :—

MONTREAL,——18—

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, or (if the case be otherwise), that I shall have attained the age of twenty-one years before the next graduation day, and that I am not (or shall not be at that time, under articles as a pupil or apprentice to any Physician, Surgeon, or Apothecary. (Signed,) A.B.

8th. The trials to be undergone by the Candidate shall be such as are referred to under Section V

9th. The following Oath or affirmation will be exacted from the Candidate before receiving his degree :

SPONSIO ACADEMICA.

In Facultate Medicinæ Universitatis.

Ego, A——B——, Doctoratus in Arte Medica, titulo jam donandus, sancto coram Deo cordium scrutatore, spondeo ;—me in omnibus grati animi officiis erga hanc Universitatem, ad extremum vitæ halitum, perseveraturum ; tum porro artem medicam caute, caste, et probe exercitaturum ; et quoad in me est, omnia ad ægrotorum corporum salutem conducentia, cum fide procuraturum ; quæ denique, inter medendum, visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

10th. The Fee for the Degree of Doctor of Medicine and Master of Surgery shall be thirty dollars, to be paid by the successful candidate immediately after examination, together with a Registration fee of one dollar.

11th. The money arising from the fees of Graduation, as well as those of Enregistration, shall be applied to the enlargement of the Medical Library and Museum, and to defraying their expenses.

V.

EXAMINATIONS.

In each class a weekly examination is held to test the progress of the Student ; and in addition two or three written examinations are given throughout the Session.

The examinations at the close of each Session are arranged as follows :

1st Year—

HISTOLOGY. BOTANY. CHEMICAL PHYSICS.—including—Molecular Forces, Heat, Light, Electricity and Magnetism.

2nd Year—Primary, Pass Examination.

ANATOMY.
PRACTICAL ANATOMY.
PHYSIOLOGY.
CHEMISTRY.
PRACTICAL CHEMISTRY.
MATERIA MEDICA.

3rd Year—

MEDICAL JURISPRUDENCE WITH TOXICOLOGY.
HYGIENE.*
GENERAL PATHOLOGY.
MEDICINE.
SURGERY.
MIDWIFERY.
CLINICAL MEDICINE.
CLINICAL SURGERY.

By means of the above arrangement a certain definite amount of work must be accomplished in each year, and an equitable division is made between the Primary and Final branches.

With regard to the Primary Examination at the end of the 2nd Year, it remains optional with the Student whether he passes in all the branches or leaves two for the 3rd Year. In any case, Chemistry and one other must be taken at the close of the 2nd Year.

VI.

SCHOLARSHIPS, MEDALS AND PRIZES.

1st. The Holmes Gold Medal, awarded to the Student of the graduating class who receives the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final Branches.

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* May be taken at the end of Second Year.

2nd. A prize in books awarded for the best examination, written and oral, in the Final Branches. The gold medallist is not permitted to compete for this prize.

3rd. A prize in books awarded for the best examination, written and oral, in the Primary Branches.

4th. The Sutherland Gold Medal, awarded for the best examination in Theoretical and Practical Chemistry, together with creditable examination in the Primary Branches.

5th. A Scholarship of the value of $100, presented by Mr. David Morrice, tenable for one year, given to the Student who passes the best theoretical and practical examination in the Institutes of Medicine.

A prize in books for the best examination in Practical Anatomy.

A prize in books for the best examination in Botany.

A money prize of $25 for the best collection of Plants. Candidates must be Students in Botany of the previous Session, and the collections or duplicates of them must remain in the College Museum.

VII.

FEES.

Distributed according to years, the class fees are as follows:

FIRST YEAR.

Anatomy	$12 00
Institutes of Medicine (Physiology and Pathology, including Demonstrations)	16 00
Materia Medica	12 00
Chemistry	12 00
Practical Anatomy	12 00
Botany	5 00
Dissecting Material	5 00
Enregistration	5 00
Total	$79 00

SECOND YEAR.

The same, without Botany, but with Hygiene, $6, and Practical Chemistry, $12—Total	$92 00

THIRD YEAR.

Medicine	$12 00
Clinical Medicine	12 00
Surgery	12 00
Clinical Surgery	12 00
Midwifery and Physicology	12 00
Med. Jurisprudence	10 00
Enregistration	5 00
Total	$75 00

FOURTH YEAR.

The same, with the omission of Jurisprudence—Total $65 00

HOSPITAL FEES.

Montreal General Hospital, Perpetual Ticket	$20 00
University Dispensary	Free
University Lying-in Hospital	8 00
	$28 00
Graduation Fee	$30 00
Matriculation Fee, payable only if the Student takes the University Matriculation	$5 00

Total Collegiate and Hospital expenses, spread over four years, about..$370

First Year Students are advised to take out the Hospital ticket, and attend the out-door practice.

It is to be understood that a Student wishing to take any other class than those of his year can do so on payment of the class fee.

Fees are payable in advance, to the Registrar, at the time of enregistration.

VIII.

TEXT BOOKS.

ANATOMY.—Gray, Wilson, Sharpey and Quain.

PRACTICAL ANATOMY.—Heath's and Ellis' Dissectors, Holden's Dissector and Landmarks.

CHEMISTRY.—Fownes, Miller, Roscoe.

PRACTICAL CHEMISTRY.—Odling, Galloway, Fresenius.

MATERIA MEDICA.—Therapeutics.—Garrod, Ringer Wood.

INSTITUTES OF MEDICINE.—*Physiology*.—Huxley's *Elementary Lessons* with either Dalton (7th Edit.), Kirke or Foster (Am. Edit.). *Pathology*.—Virchow on Post-Mortems.

HISTOLOGY.—Osler.
SURGERY.—Holmes' Surgery, Erichsen, Druitt, Bryant.
PRACTICE OF MEDICINE.—Flint, Roberts, Bristowe, DaCosta.
MEDICAL JURISPRUDENCE.—Taylor, Guy and Ferrier, Woodman & Tidy's Handbook, Maudsley on Insanity, Shepherd's Lectures on Madness.

MIDWIFERY.—Lusk, Playfair or Leissman.
GYNÆCOLOGY.—Edis. Goodell's Lessons. Hart and Barbour's Manual.
HYGIENE.—Parks, Hammond, Wilson.

IX.

MUSEUM.

Most of the usual Pathological Specimens are collected here, obtained from Hospital and private practice. They are largely used in illustrating the lectures on Medicine and Surgery. There are also wax and papier-maché models.

In the past year the Museum has undergone a thorough revision, and a large number of specimens have been added. A printed catalogue is in course of preparation.

Graduates of the University are invited to contribute specimens.

The Curator will be in the Museum every Saturday at 11 a.m. to demonstrate and explain the preparations to any students who may care to attend.

X.

LIBRARY.

This comprises about eight thousand volumes, including all the standard text-books and works of reference, together with complete files of the leading periodicals. Students may obtain books on making a deposit of $4.00, which is refunded on returning the volumes.

XI.

McGILL MEDICAL SOCIETY.

This Society, composed of enregistered Students of the Faculty, meets once a week during the Summer Session, and fortnightly during the winter, for the reading of papers and the discussion of medical subjects. It is presided over by a physician chosen by the members.

A reading room has been established in connection with the Society, in which the leading English and American medical journals are on file.

XII.

COST OF LIVING, &c.

This will, of course, vary with the tastes and habits of the Student, but the necessary expenses need not exceed those in smaller towns. Good Board may be obtained from $14 to $20 per month. A list of Boarding-houses is prepared annually by the Secretary of the University, and may be procured from the Janitor at the Medical College.

XIII.

HOSPITALS.

MONTREAL GENERAL HOSPITAL.

The Montreal General Hospital affords ample means for the instruction of Students in Clinical Medicine and Surgery. The daily number of beds occupied by patients averages from 140 to 150, and during epidemic visitations has reached a much higher number. The Governors have also erected a Hospital for Children, contiguous to the Reid Wing of the present building. The Students have thus an opportunity of becoming familiar with nearly all the diseases of suffering humanity, and with the peculiarities imparted to them by infancy, adolescence, maturity and declining age.

The large number of out-door patients that are treated in the Hospital—averaging from sixty to seventy daily—supply illustrations of most of the diseases of infants and children, of very many of the eye

and skin, and of those chronic and ill-defined ailments which, as they do not require admission to the wards of a hospital, would not otherwise come under the observation of the Student.

The large number of patients affected with diseases of the eye and ear, now attending the out-door department, will afford Students ample opportunity to become familiar with all the ordinary affections of those organs, and to make themselves proficient in the use of the ophthalmoscope, and it is hoped that every Student will thus seek to gain a practical knowledge of this important branch of Medicine and Surgery. Operations are performed on the eye, by Dr. Buller, after the out-door patients have been seen, and Students are invited to attend the same, and, as far as practicable, to keep such cases under observation so long as they remain in the Hospital.

The shipping contributes many examples of accidents and surgical cases.

CLINICAL CLERKS to both medical and surgical wards are appointed every three months, and each one during his term of service conducts, under the immediate direction of the Clinical Professors, the reporting of all cases in the ward allotted him. The holding of one of these offices is found to be of the greatest possible advantage to Students, as affording a true *practical* training for his future professional life. They will be awarded on application at the end of each Session to final Students of that year, in order of their standing in the primary examination.

DRESSERS are also appointed to the Surgical wards and to the Out-door Department. For these appointments application is to be made to the Professor of Clinical Surgery, and to the Out-door attending Physicians.

The Operating Room (used also for a lecture room) is so constructed as to enable the Students to obtain a good view of the operations.

MONTREAL DISPENSARY.

ST. ANTOINE STREET.

About 10,000 patients yearly are treated at this Institution. The cases are of great variety, comprising a large number of pulmonary

affections and children's diseases. Minor operations are of daily occurrence, and excellent practice is afforded in the application of splints and bandages. The attending Physicians furnish Students with all possible facilities. The hours of attendance are from 12–2 daily.

UNIVERSITY LYING-IN HOSPITAL.

This is under the direction of the Professor of Midwifery. Students who have already attended one course of his lectures are furnished with cases in rotation; they are advised to attend this Institution as much as possible during the summer, when, since there are as many patients and not so many pupils as in winter, a larger proportion of cases falls to the share of each.

UNIVERSITY DISPENSARY.

This Dispensary was established two years ago for special clinical instruction in Diseases of women; and special clinics have been established at the same place, for Diseases of Children and for Diseases of the Skin.

Diseases of Women.—The difficulty of affording to senior students practical instruction in gynæcology is felt in most schools, as women will not present themselves for examination before a large class of men. The plan followed for the past four years with marked success has been the limitation of the number of students to two or three, who in rotation assist at the examinations, and receive instruction in the diagnosis and treatment of uterine diseases and the use of gynæcological instruments. The attendance is on Tuesdays, Thursdays and Saturdays, 1–4 p.m.

Diseases of Children.—The clinic is on Tuesdays, Thursdays and Saturdays at 11 a.m, when the patients are seen and instruction given on the cases.

Diseases of the Skin.—The Surgeon in charge will attend every Monday and Friday at 2 p.m. Arrangements will be made whereby a limited number of Students can be present on each occasion.

XIV.

RULES FOR STUDENTS.

1. In the case of disorderly conduct, any Student may, at the discretion of the Professor, be required to leave the Class-room. Persistence in any offence against discipline after admonition by the Professor shall be reported to the Dean of Faculty. The Dean may, at his discretion, reprimand the Student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from Classes.

2. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session shall in each case be determined by the Faculty.

3. While in the College, Students are expected to conduct themselves in the same orderly manner as in the Class-rooms.

4. When Students are brought before the Faculty under the above rules, the Faculty may reprimand, impose fines, disqualify from competing for prizes and honours, suspend from Classes, or report to the Corporation for expulsion.

XV.

PAST SESSION.

The total number of students enregistered in this Faculty during the past year was 188, of whom there were, from—

Ontario,	93	New Brunswick,	15
Quebec,	44	P. E. Island,	9
Nova Scotia,	7	Newfoundland,	2
Manitoba,	3	West Indies,	2

United States, 13.

The following gentlemen, 42 in number, have passed their Primary Examination on the following subjects : Anatomy, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica and Pharmacy, Institutes of Medicine and Botany or Zoology. Their names and residences are as follows :

Allan, J. H. B.....Montreal, Q.
Arthur, R. H.....Brighton, O.
Baird, T. A. D.....Chesterfield, O.
Barrett, J. A.....Prescott, O.
Burrows, F. N.....Drayton, O.
Cassidy, G. A.....Goldstone, O.
Daly, W. D., B. A.....Ogdensburg, N.Y.
Darey, J. H., B.A. (McGill).....Montreal, Q.
Eberts, D. W.....Chatham, O.
Ferguson, W. A., B.A. (McGill).....Richibucto, N.B.
Finley, F. G.....Montreal, Q.
Groves, W.....Carp, O.
Hallett, E. O.....Truro, N.S.
Hanna, A. E.....Harlem, O.
Harkin, Fred.....Vankleek Hill, O.
Hurdman, H. T.....Aylmer, Q.
Hutchison, J. A.....Goderich, O.
Irvine, R. T.....Carp, O.
Johnson, C. H.....Almonte, O.
Johnson, H. D.....Charlottetown, P.E.I.
Jolliffe, J. H., B.A. (Union).....Cincinnati, Ohio.
Klock, W. H.....Aylmer, Q.
Landor, T. H.....London, O.
Merritt, D. P., B.A. (McGill).....Ottawa, O.
McCormack, N.....Pembroke, O.
McClure, W., B.A. (McGill).....Lachute, Q.
McGannon, M. C.....Prescott, O.
McKenzie, J. T.....Plainfield, O.
McLellan, J. H.....Summerside, P.E.I.
McMillan, D. L.....Alexandria, O.
O'Brien, T.....Brudenell, O.
Osborne, A. B.....Hamilton, O.
Park, James.....Newcastle, N.B.
Powell, F. H.....Ottawa, O.
Robertson, A. M.....Brockville, O.
Ross, L. D.....Montreal, Q.
Ruttan, R. F., B.A. (Toronto).....Napanee, O.
Scott, J. M.....Carleton Place, O.
Sharp, I. C.....Sussex, N.B.
Shibley, J. L., B.A. (Victoria).....Yarker, O.
Trapnell, H. E.....Harbour Grace, Nfld.
Wilson, J. A. K.....Manotick, O.
Wood, Ed. G.....Lonsdeboro, O.

The following gentlemen, 30 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M. from the University. These exercises consist in examinations, both written and oral, on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics and Diseases of Women and Children, Medical Jurisprudence and Hygiene,—and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital:

Allan, Clarence E.....East Farnham, Q.
Bowser, James C .....Kingston, N.B.
Cameron, Chas. E.....Montreal, Q.
Carruthers, George.....North Bedeque, P.E.I.
Dearden, George A.....Richmond, Q.
Gardner, John J.....Cornwall, O.
Gray, James.....Brucefield, O.
Hanvery, Chas. B. H.....Cleveland, Ohio.
Harrisson, Henry J.....Moulinette, O.
Henry, Wm. G.....Chatham, O.
Hopkins, Alf. J.....Cookshire, Q.
Johnson, Jonathan R.....Farmersville, O.
Lathern, J. Simpson.....Windsor, N.S.
Loring, J. Brown.....Sherbrooke, Q.
Maher, J. J. E.....Albany, N.Y.
Martel, Ovide.....Montreal, Q.
McLeod, Arch , B.A. (McGill).....Orwell, P.E.I.
MacNeill, Alex.....West River, P.E.I.
MacLean, John W.....Strathlorne, N.S.
McDonald, Alexander.....Paisley, O.
Muckey, F. S.....Medford, Minn.
Phippen, Samuel S. C.....Parkhill, O.
Ross, Wm. K.....Goderich, O.
Rutledge, And. J.....Bayfield, O.
Scott, Walter McE.....Winnipeg, Man.
Shaver, Wm. H.....Wales, O.
Sihler, George A.....Simcoe, O.
Stewart, Andrew.....Howick, Q.
Struthers, Robt. B.....Philipsburg, Q.
Wood, Edward S.....Faribault, Minn.

Of the above gentlemen Messrs. Hopkins and Sihler are under age and await their majority before receiving the degree. Mr. Stewart a native of this province, awaits the completion of four years from the date of Matriculation before receiving his degree.

The following have passed in Practical Chemistry :—

Armitage, T. H.	Dazé, H	McMillan, G. A.
Aylen, P.	Elder, John. B.A.	Owens, J. G.
Brown, W. D	Graham, J.	Palmer, G. F.
Campbell, A. W.	Gustin, Smith.	Patterson, R. L.
Cattanach, W. C.	Johnstone, H. V.	Raymond, J. H.
Comstock, H. M.	Lynskey, N. T.	Shibley, J. L.
Corsan, D	McDonald, H. J.	Wishart, D. A. G. B.A.
Crocket, W. C.	McMeekin, J. W.	White, W. W. B.A.

The following have passed in Chemistry :—

Aylen, Peter.	Corsan, Douglas.	McMeekin, J. W.
Blackader, E. H.	Dazé, Henri.	Palmer, G. F.
Brown, W. D.	Elder, John. B.A.	Platt, A. T.
Crockett, W. C. B.A.	Gustin, Smith.	Raymond, J. H. B.A.
Campbell, A. W.	Kirkpatrick, R. C.	White, W. W. B.A.
Carter, L. H	Kennedy, R. A.	Wishart, D. A. G. B.A.
Cattanach, W. C.	Lynskey, N. T.	

The following have passed in Anatomy :—

Armitage, J. H.	Craig, M. A.	McDonald, H. J.
Brown, W. D.	Dazé, H.	McMeekin, J. W.
Cameron, D. A.	Doherty, W. W.	McMillan, A. D.
Carter, L. H.	Graham, J.	McMillan, G. A.
Catanach, W. C.	Gustin, S.	Palmer, G. F.
Corsan, D.	Lynskey, N. T.	Patterson, R. L.
	Platt, A. T.	

The following have passed in Practical Anatomy :—

Corsan, D.	Fairbanks, C. E.	McDonald, H. J.
	McMillan, G. A.	

The following have passed in Institutes of Medicine :—

Armitage, J. H.	Corsan, D.	Lynskey, N. T.
Brown, W. D.	Dazé, H.	McDonald, H. J.
Campbell, A. W.	Graham, J.	McMeekin, J. W.
Comstock, H. M.	Gustin, S.	Palmer, G. F.
	Sheriff, G. R.	

The following have passed in Materia Medica :—

Aylen, P.	Campbell, A. W.	Comstock, H. M.
Brown, W. D.	Cattanach, W. C.	Dazé, H.

Graham, J.
Gustin, S.
Johnstone, H. V.
Lynskey, N. T.
Mattice, J. S.
McDonald, H. J.
McMeekin, J. W.
McPherson, D. T.
McMillan, A. D.
Palmer, G. F.
Platt, A. T.

The following have passed in Medical Jurisprudence :—

James L. Addison,
D. A. Cameron,
Jno. R. Church,
Sheldon E. Cook,
T. B. Davies,
W. W. Doherty,
J. A. Duncan,
E. J. Elderkin,
C. E. Gooding,
G. A. Graham,
J. A. Hutchison,
J. H. Joliffe, B.A.,
Wyatt G. Johnston,
T. H. Landor,
J. P. McInerney,
Isaac N. McLean, B.A.,
W. M. Nelson,
T. O'Brien,
W. Porteous,
James Park,
W. Scott Renner,
G. B. Rowell,
I. C. Sharp,
H. E. Smythe,
E. H. Smith,
F. D. Walker,
S. F. Wilson, M.A.

The following have passed in Hygiene :—

J. L. Addison,
J. A. Barrett,
D. A. Cameron,
S. E. Cook,
T. B. Davies,
J. A. Duncan,
J. Elder, B.A.,
E. J. Elderkin,
Chas. Fairbanks,
W. A. Ferguson, B.A.,
C. E. Gooding,
G. A. Graham,
S. Gustin,
J. A. Hutchison,
W. G. Johnston,
J. H. Jolliffe, B.A.,
T. H. Landor,
W. McClure, B.A.,
J. T. McKenzie,
J. N. McLean,
J. P. McInerney,
D. P. Merritt, B.A.,
W. M. Nelson,
T. O'Brien,
Wm. Porteous,
G. H. Raymond, B.A.,
W. S. Renner,
G. B. Rowell,
R. F. Ruttan, B.A.,
J. C. Sharp,
Ed. H. Smith,
H. E. Smyth,
F. D. Walker,
S. F. Wilson, M.A.,
D. A. G. Wishart, B.A.

FIRST YEAR.

The following have passed in Physics :—

W. C. Bessey,
H. S. Birkett,
J. L. Clark,
I. L. Duffett,
D. McG. De Cow,
E. H. Earl,
T. M. Gardner,
J. H. Y. Grant,
J. B. Gibson,
G. J. Gladman,
J. L. Hague, B.A.,
P. H. Hughes,
T. J. Haythorne,
A. L. Howey,
J. A. Kinloch,
G. C. Lepage,
E. C. Leslie,
J. M. McKay,
T. G. McGannon,
W. J. McCuaig,
E. P. McCollum,
V. H. Morgan,
Alf. Poole,
L. F. Ross,
Alf. Raymond,
W. M. Rowat,
F. T. Robertson,
F. J. Seery,
A. J. Schmidt,
A. R. Turnbull,
P. H. Warneford,
A. N. Worthington,
F. J. White,
C. W. Wilson,
A. A. Young.

The following have passed in Histology :—

H. S. Birkett,	J. A. Kinloch,	W. M. Rowat,
Ed. H. Blackader,	R. C. Kirkpatrick,	F. T. Robertson,
J. L. Clark,	G. C. Lepage,	F. J. Seery,
W. C. Crocket, B.A.,	E. C. Leslie,	A. J. Schmidt,
J. L. Duffett,	J. M. McKay,	A. F. Schmidt,
E. H. Earl,	E. McKay,	G. C. Stephen,
John Elder, B.A.,	T. G. McGannon,	A. R. Turnbull,
T. M. Gardner,	W. J. McCuaig,	P. H. Warneford,
J. H. Y. Grant,	E. P. McCollum,	A. N. Worthington,
J. B. Gibson,	J. G. McGregor,	F. J. White,
G. J. Gladman,	V. H. Morgan,	W. W. White, B.A.,
J. L. Hague, B.A.,	P. C. Pilon,	D. A. G. Wishart, B.A.,
P. H. Hughes,	Alf. Poole,	C. W. Wilson,
T. J. Haythorne,	L. F. Ross,	J. F. Williams,
A. L. Howey,	Alf. Raymond,	A. A. Young.
R. A. Kennedy,	G. H. Raymond, B.A.,	

The following have passed in Botany :

CLASS I.

Wilson, C. W. (Prize),	Howey, Arthur L.,	Robertson, T. D.,
Kinloch, J. A. (Prize),	Duffet, John L.,	Worthington, A. N.
Mackay, J. M.,	Grant, J. H. Y.,	

CLASS II.

Leslie, A. C.,		Earl, Edgar H.,	Equal	Gray, James E.,	
McCollum, E. P.,	Equal	Flagg, J. D.,		Hague, J. L.,	Equal
Warnford, P. H.,		Raymond, Alfred,		Young, A. A.,	
Stephen, G. C.,		Hughes, P. H.,		Gibson, Jas. B.,	Equal
Turnbull, Russell,		Gladman, G. J.,		Lepage, G. C.,	
Birkett, H. S.,		Morgan, V. H.,	Equal	T	
Poole, Alfred,		Seery, F. J.,			

CLASS III.

Schmidt, A. F.,	Pilon, P. C.,	McGregor, J. G.,
De Cew, D. McG.,	McCuaig, W. J.,	Harte, J. H. M.,
McGannon, T. G.,	Wishart, D.,	Bessey, W. C.,
Rowat, W. M.,	Schmidt, A. J.,	McKay, E.

Omitted in last Calendar.

Burrows, T.

MEDALS, PRIZES AND HONOURS.

THE HOLMES GOLD MEDAL FOR THE BEST EXAMINATION IN THE PRIMARY AND FINAL BRANCHES was awarded to C. E. Cameron of Montreal.

THE PRIZE FOR THE BEST FINAL EXAMINATION was awarded to J. Brown Loring of Sherbrooke, Q.

THE PRIZE FOR THE BEST PRIMARY EXAMINATION was awarded to Edwin G. Wood, Lonsdeboro, O.

THE SUTHERLAND GOLD MEDAL was awarded to R. F. Ruttan B.A., Napanee, O.

The Morrice Scholarship in Physiology was awarded to R. F Ruttan, B.A., Napanee, O.

The following gentlemen, arranged in the order of merit, deserve honourable mention :

In the Primary Examination, R. F. Ruttan, B.A., W. A. Ferguson, B.A., J. H. Darey, B.A., F. G. Finley, H. E. Trapnell, H. T. Hurdman, T. A. D. Baird, F. N. Burrows, M. C. McGannon, and Fred. M. Harkin.

In the Final Examination Messrs. Struthers, Lathern, Bowser, Gray, Carruthers, Gardner, Henry, Scott and Johnson J. R.

PROFESSORS' PRIZES.

BOTANY.—Prize, Chas. W. Wilson, Cumberland, O., and J. A. Kinloch, Montreal.

FOR THE BEST COLLECTION OF PLANTS.—H. E. Trapnell, Harbour Grace, Nfld.

PRACTICAL ANATOMY.—Demonstrator's Prize, 2nd year F. G. Finley, of Montreal ; 1st year

MORBID ANATOMY.—James Gray of Brucefield, Ont., and C. E. Gooding of Barbadoes, W. I.

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McGill University.—Faculty of Medicine.

THIRD AND FOURTH YEAR, TIME TABLE, 1883-84.

A.M.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Medical Jurisprudence.	General Pathology.	Medical Jurisprudence.		Medical Jurisprudence.	
10	Surgery, Examination.	Surgery.	Surgery.	Surgery.	Surgery.	Morbid Anatomy Demonstrated.
11	Midwifery.	Gynæcology.	Midwifery.	Gynæcology.	Midwifery.	
P.M. 1-2.30	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.
2.30	Clinical Gynœcology, at	University Dispensary,	4th year students in groups			
2.30	Ophthalmic and Aural Cli	nic daily.				
	Clinic on Diseases of the	Skin. University Dispen	sary, Monday and Friday.			
	Clinic on Diseases of Chil	dren. University Dispen	sary, Tuesday and Satur	day		
4	Medicine, Examination.	Medicine.	Medicine.	Medicine.	Medicine.	
5	Ophthalmic and Aural Surgery Lecture.					

Autopsies are performed at the General Hospital between 12 and 2 p.m.

McGill University — Faculty of Medicine.

FIRST AND SECOND YEAR, TIME TABLE, 1883-84.

A.M.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy, Examination.	Anatomy.	Anatomy.	Anatomy.	Anatomy, Examination.	Hygiene, 2nd or 3rd Year.
10	Practical Chemistry, 2nd Year, till 12 o'clock.	Botany, 1st Year.	Practical Chemistry, 2nd Year.	Botany, 1st Year.	Practical Chemistry, 2nd Year.	Botany Demonstration.
11	Out-Patients, Montreal General Hospital	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital.
P.M 2	Materia Medica.	Materia Medica.	Materia Medica.	Materia Medica.	Materia Medica Examination.	Practical Physiology, 2nd Year.
3	Physiology Examination.	Physiology.	Physiology.	Physiology	Histology. 1st Year, Lecture.	
4	Practical Histology.	Practical Histology.	Practical Histology.	Practical Histology.	Histology Demonstrations.	
5	Chemistry.	Chemistry.	Chemistry.	Chemistry.	Chemistry Examination.	
8 to 10	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	

N.B.—The Demonstrator's Hours in the Dissecting Room are from 10-12 a.m and from 8-10 p.m.

* The First and Second Year Students are urged to attend the Out-Patients Practice whenever possible.

Faculty of Law.

THE PRINCIPAL (Ex-officio).

Professors :—LAFLAMME.
CARTER.
KERR.
TRENHOLME.
WURTELE.
RAINVILLE.

Professors :—ARCHIBALD.
LAREAU.
HUTCHINSON.
ROBIDOUX.
DAVIDSON.

Lecturer :—HART.

Dean of Faculty.—Professor W. H. KERR, Q.C., D.C.L.

Registrar of the Faculty.—J. S. ARCHIBALD, M.A., B.C.L.

Corporation Examiners for Degrees.—Professors N. W. TRENHOLME, M.A., B.C.L., and EDMOND LAREAU, B.C.L.

Matriculation Examiners of the Faculty.—Professors J. S. ARCHIBALD, M.A., B.C.L., and EDMOND LAREAU, B.C.L.

The Classes in Law will commence on Monday, the First of October, 1883, and will extend to March 31st, 1884.

The Examinations will be held in the William Molson Hall, McGill College Building, from 4 to 6 p.m., on the tenth and following days of March, 1884.

The Lecture Rooms of the Faculty are situated in the Molson's Bank Chambers, in St. James street.

The complete course of study in this Faculty extends over three years ; but it may be shortened to two years, when the student matriculates in the third year of his indentures.

Students who avail themselves of the privilege of attending two years only, will nevertheless be required to pass an examination in the subjects comprised in the three years' course.

Matriculated Students who do not take the whole course are classed as Partial Students, and are not entitled to proceed to the Degree of B.C.L.

Occasional Students will be received without matriculation, for attendance on any particular series of Lectures.

Students who have completed their course of three years,—or of two years, if they have commenced in the third year of their indentures,—and have passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Faculty, to the Degree of Bachelor of Civil Law.

COURSE OF STUDY.

FIRST YEAR.

Legal History	Professor LAREAU.
Civil Law :	
Persons	Professor ROBIDOUX.
Property	
Ownership	
Roman Law :—	
Institutes of Justinian, B. I	Professor TRENHOLME.
Gaius, C. I	
Maine, Chapters I to IV	
Civil and Commercial Law :	
Commercial Agency	Professor DAVIDSON.
Civil Procedure:	
Introduction	Professor HUTCHINSON.
Criminal Law	Professor ARCHIBALD.
Notarial Course :—	
Theory and Practice of Notarial Deeds and Proceedings	Lecturer HART.

SECOND YEAR.

Legal Bibliography	Professor LAREAU.
Civil Law :—	
Rents	
Transaction	
Suretyship	
Civil Law :—	
Usufruct	Professor ROBIDOUX.
Real Servitudes	
Gifts and Wills	
Substitutions	
International Law	Professor KERR.
Civil and Commercial Law :—	
Sales	

Roman Law :—

Institutes of Justinian, B. II. and B. III. to Title 14.
Gaius, Chaps. II. and III.
Maine, Chapters V. to VIII. — Professor TRENHOLME.

Commercial Law :—

Partnership
Corporations
Bills of Exchange — Professor DAVIDSON.

Civil Procedure :—

First Part. — Professor HUTCHINSON.

Criminal Procedure and Election Law — Professor ARCHIBALD.

Notarial Course :—

Theory and Practice of Notarial Deeds and Proceedings — Lecturer HART.

THIRD YEAR.

Civil Law :—

Privileges and Hypothecs
Prescription
Imprisonment in Civil Cases — Professor LAREAU.

Civil Law :—

Successions
Marriage Covenants
Dower — Professor ROBIDOUX.

International Law
Commercial Law :—
Carriage of Persons
Insurance
Bottomry and Respondentia — Professor KERR.

Roman Law :—
Institutes of Justinian, B. III. from Title 14.
Maine, Chapters IX. and X.
Civil Law :—
Mandate
Loan
Deposit
Pledge
Evidence — Professor TRENHOLME.

Commercial Law :—

Merchant Shipping
Affreightment
Insolvency — Professor DAVIDSON.

Civil Procedure :—
Second Part ..... Professor HUTCHINSON.
Criminal Procedure and Election Law ..... Professor ARCHIBALD.
Notarial Course :—
Theory and Practice of Notarial Deeds and Proceedings ..... } Lecturer HART.

FACULTY REGULATIONS.

1. Any person desirous of becoming a Matriculated Student, shall apply to the Dean of the Faculty for examination and entry in the Register of Matriculation, and shall procure a ticket of Matriculation and tickets of admission to the Lectures for each Session of the Course. (Students are requested to call on the Registrar, who will furnish them with the necessary forms.)

2. Candidates for Matriculation shall pass an examination, satisfactory to the Faculty of Law, in Latin, French, English, Mathematics, and Ancient and Modern History, and the books upon which such examination shall be had shall be from time to time fixed by the Faculty.

II. MATRICULATION IN THE FACULTY OF LAW.

The books at present prescribed are the following :—

Latin.—Virgil, Æneid, Book I. ; Cicero, Orations I. and II., against Catiline ; Latin Grammar.

French.—De Fivas' " Grammaire des Grammaires ;" *Molière, ' Le Bourgeois Gentilhomme ;' †Translation into French of Macaulay's Essay on Frederick the Great.

Exercises in composition and grammatical analysis, in English and French.

Mathematics.—Arithmetic ; Algebra to the end of simple equations ; Euclid, Books I., II , III.

History.—White's Outline of Universal History (or any equivalent manual), *Green's Short History of the English People ; Miles' School History of Canada ; †Duruy, Histoire de France.

Literature.—*Collier's Biographical History of English Literature ; †Laharpe, Cours de Litérature ; †Lefranc, Cours de Litérature.

Rhetoric.—Whately's Rhetoric ; Blair's Lectures (small edition).

Philosophy.—*Whately's Logic ; †La Logique de Port Royal ; †Cousin, Histoire de la Philosophie ; *Stewart's Outline of Moral Philosophy.

N.B.—The works mentioned above preceded by an asterisk are for English students only. Those preceded by a cross are for French students only. The remainder are for both English and French.

3. Students in Law shall be known as of the First, Second and Third Years, and shall be so graded by the Faculty. In each year, Students shall take the studies fixed for that year and those only, unless by special permission of the Faculty.

4. The Register of Matriculation shall be closed on the 1st of November in each year, and return thereof shall be immediately made by the Dean to the Registrar of the University. Candidates applying thereafter may be admitted on a special examination to be determined by the Faculty; and, if admitted, their names shall be returned in a supplementary list to the Registrar.

5. Persons desirous of entering as Occasional Students shall apply to the Dean of the Faculty for admission as such Students, and shall obtain a ticket, or tickets, for the class or classes they desire to attend.

6. Students who have attended Collegiate courses of study in other Universities for a number of terms or sessions, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty.

7. All Students shall be subject to the following regulations for attendance and conduct :—

(1) A class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted; and the said class-book shall be submitted to the Faculty at a meeting to be held between the close of the lectures and the commencement of the examinations; and the Faculty shall, after examination of such class-book, decide which students shall be deemed to have been sufficiently regular in their attendance to entitle them to proceed to the examination in the respective classes.

(2) Punctual attendance on all the classes proper to his year is required of each student. Professors will note the attendance immediately on the commencement of their lectures, and will omit the names of Students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class-room, if persisted in after admonition by the Professor, will be reported to the Dean of the Faculty, who may reprimand the Student or report to the Faculty, as he may decide. While in the building, or going to or from it, students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the Class-rooms, or elsewhere in the building, will admonish the student; and, if necessary, report him to the Dean.

(3) When Students are reported to the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes or honours, suspend from classes, or report to the Corporation for expulsion.

(4) Any Student injuring the furniture or building will be required to repair the same at his own expense, and will, in addition, be subject to such penalty as the Faculty may see fit to impose.

(5) The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session shall in each case be determined by the Faculty.

(6) All cases of discipline involving the interests of more than one Faculty, or of the University generally, shall be reported to the Principal, or, in his absence, to the Vice-Principal.

8. At the end of every Session there shall be a general examination of all the Classes, under the Superintendence of the professors, and of such other Examiners as may be appointed by the Corporation, which examination shall be conducted by means of printed questions, answered by the students in writing in the presence of the Examiners. The result shall be reported as early as possible to the Faculty, which shall decide the general standing of the students accordingly.

9. Each Professor shall deliver at least two Lectures in each week. Each Lecture shall be of one hour's duration ; but the Professors shall have the right from time to time to substitute an examination for any such Lectures.

10. No Student shall be considered as having kept a Session, unless he shall have attended regularly all the courses of Lectures, and shall have passed the Sessional Examinations to the satisfaction of the Faculty, in all the classes of his year.

11. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any Student from attendance on any particular Course or Courses of Lectures, but no distinction shall, in consequence, be made between the Examinations of such Students and those of the Students regularly attending Lectures. No Student shall pass for the degree of B.C.L. unless he has prepared a Thesis, either in French or English, which shall have been approved by the Faculty.

12. The subject of such Thesis shall be left to the choice of the Student, but it must fall within the range of study of the Faculty, and shall not exceed twenty pages of thirty lines each. Each Student shall on or before the first day of February forward such Thesis to the Registrar of the Faculty, marked with the *nom de plume* which he shall adopt, and accompanied with a sealed envelope, bearing the same *nom de plume* on it, and containing inside his name and the subject of his Thesis, and the envelope shall be opened in presence of the Faculty after the final decision shall be given on the respective merits of the several Theses.

13. The Elizabeth Torrance Gold Medal, in the Faculty of Law, shall be awarded to the Student who being of the Graduating Class, having passed the Final Examination, and having prepared a Thesis of sufficient merit in the estimation of the Faculty to entitle him to compete, shall take the highest marks in a special Examination for the medal, which examination shall include the subject of Roman Law.

14. Every Candidate before receiving the Degree of B.C.L. shall make the following declaration :

Ego A. B. polliceor, me, pro viribus meis, studiosum fore communis hujus Universitatis boni, operamque daturum ut decus ejus ac dignitatem amplificem et officiis omnibus ad Baccalaureatus in Jure Civili gradum pertinentibus fungar.

15. The fees exigible in this Faculty are as follows:

Matriculation Fee	$ 5 00
Sessional Fee by Ordinary Students	$36 00
Sessional Fee by Occasional or Partial Students, for each course	5 00
Graduation Fee, including Diploma and Case	10 00
Additional Fee for Notarial Students	10 00

Matriculation and Sessional Fees must be paid on or before Nov. 1st, and if not so paid the name of the Student shall be removed from the books, but may be re-entered by consent of the Faculty, and on payment of a fine of not less than $3. Students already on the books of the University shall not be required to pay any Matriculation Fee.

16. The Course of Lectures upon the Theory and Practice of Notarial deeds and proceedings is optional to candidates for the profession of law, but is compulsory upon candidates for the Notarial profession: the latter may omit the subject of civil procedure.

17. Notarial students shall rank for general standing upon their examinations in the notarial class, and failure to pass such examination shall have the same effect as failure in any other compulsory subject.

18. Occasional students may be admitted into said class on such terms as shall be arranged by the Faculty.

19. Every Candidate for the Degree of D.C.L. in Course, under Chap. VIII., Section 4, of the Statutes of the University, shall be required to pass within four years from his graduation as B.C.L., such examination as shall be prescribed by the regulations of the Faculty of Law: unless he shall have graduated as a B.A. of this University, either in Course or *ad eundem*. And not less than two months before proceeding to the Degree of D.C.L., the Candidate shall deliver to the Faculty of Law twenty-five printed copies of a Thesis or Treatise upon a subject selected or approved by the Faculty; such Thesis to contain not less than twenty-five octavo pages of printed matter, and possessing such a degree of literary and scientific merit as shall, in the opinion of the Faculty, justify them in recommending him for that Degree. And in addition to the foregoing qualifications, the Candidate shall pay to the Secretary of the Faculty annually during term, for the retention of his name on the books of the Faculty, during the said period of twelve years, a fee of two dollars, to be added to the Library fund of the Faculty.

Except as regards the Thesis, this regulation applies only to those who have taken the degree of B.C.L., subsequently to October, 1883. The examination under the above rule is as follows:

(1) *International Law*:—

Phillimore: Wharton, Conflict of Laws: Fœlix, Droit International Privé.

(2) *Roman Law :—*

Gaii Commentarii, IV.; Pauli Sententiæ; Pomponii Fragmentum de origine juris D. 1. 2.; Novellæ Justiniani, cxxviii. cxxvii; Ortolan, Institutes de Justinien, Vol. i.; Mommsen's History of Rome.

(3) *Constitutional Law :—*

Hallam, Constitutional History of England; May, Constitutional History of England; Mill, Representative Government; The British North America Act, and cases thereunder.

University School Examinations.

1884.

UNDER THE SUPERINTENDENCE OF McGILL UNIVERSITY, MONTREAL, AND THE UNIVERSITY OF BISHOP'S COLLEGE, LENNOXVILLE.

FOR CERTIFICATES OF THE UNIVERSITY AND THE TITLE OF ASSOCIATE IN ARTS.

These Examinations are held in Montreal and at Lennoxville, and local centres may be appointed elsewhere on application to the Principal of either University, accompanied with satisfactory guarantee for the payment of necessary expenses.

The Examinations are open to Boys or Girls, under 18 years of age, from any Canadian School.

SUBJECTS OF EXAMINATION.

I. PRELIMINARY SUBJECTS.

English Reading	30	*Marks.*
English Dictation	40	do
English Grammar (as in Morell or Smith)	50	do
Arithmetic (all the ordinary rules, including square root)	90	do
Geography (acquaintance with the maps of each of the four Continents, and of British North America)	50	do
British History (as in Collier), and *Canadian History* (as in Jeffers)	50	do

The Candidates will also be examined in the Gospels, unless objection be made thereto by their parents or guardians, and creditable answering in the same will be mentioned in the Certificate.

Additional marks, not exceeding 20, may be allowed in the Dictation paper, for quality of handwriting.

II. Optional Subjects.

Section 1. Languages.

Latin :—

Ovid, Fasti.
Cicero, Cato Major.
Virgil, Æneid, Bk. V. — 150 marks.

Greek :—

Xenophon, Anabasis, Bk. II.
Homer, Iliad, Bk. IV. — 150 do

French.

Grammar.
Darey's Lectures Françaises. — 120 do

German.

Grammar.
Adler's Reader, Section II.
Translation from German into English. — 120 do

Section 2. Mathematics, Natural Philosophy, &c.

Geometry.
Euclid, I. II. III ..... 150 do

Algebra.
Elementary Rules, Involution, Evolution, Fractions, Simple Equations. — 150 do

Plane Trigonometry.
Measurement of Angles, Trigonometrical Ratios of a single Angle and of two Angles, Complemental and Supplemental Angles, and the Solution of Right-Angled Triangles. — 100 do

Natural Philosophy.
Mechanics and Hydrostatics (as in any ordinary School Text-Book). — 100 do

Geometrical and Freehand Drawing ..... 100 do

Section 3. English.

The English Language.
Philology (as in Smith's or Mason's Grammar and Peile's Primer).
Trench's Study of Words. — 120 do

English Literature.
English Literature, Primer by S. A. Brooks.
Shakespeare, Julius Cæsar.
Scott's Lady of the Lake. — 120 do

History.—(As in Primers of Greece and Rome, and Collier's Great Events ..... 100 do

Geography.—Physical, Political and Commercial ..... 100 do

Section 4. Natural Science, &c.

Zoology (as in Nicholson's Introductory Text-Book)	100	do
Botany (as in Gray's "How Plants Grow")	100	do
Geology (as in Dana's Text-Book)	100	do
Chemistry (as in Miller's Introduction to Inorganic Chemistry, pp. 1 to 198)	100	do

GENERAL REGULATIONS.

1. Candidates will not be considered as having passed in any subject unless they have obtained at least *one-third* (and, in the case of Reading and Dictation, *two-thirds*) of the total number of marks obtainable in that subject.

2. Every Candidate for the Certificate of Associate in Arts, or for Junior Certificate, must pass in all the Preliminary Subjects.

3. Every Candidate for the Certificate of Associate in Arts must also pass in the Optional Subjects contained in one of the three following groups:

First.—(*a*) Two Subjects of Section 1, one of them being Latin or Greek.
(*b*) Geometry or Algebra of Section 2.
(*c*) Two of the eight Subjects of Sections 3 and 4.

Second.—(*a*) French and German of Section 1.
(*b*) Geometry or Algebra of Section 2.
(*c*) Two Subjects of Section 3.
(*d*) One Subject of Section 4.

Third.—(*a*) One Subject of Section 1.
(*b*) Two Subjects of Section 2.
(*c*) Three of the eight Subjects of Sections 3 and 4.

4. Candidates for Junior Certificates must pass in the following:
(*a*) One Subject of Section 1.
(*b*) One Subject of Section 2.
(*c*) One of the eight Subjects of Sections 3 and 4.

5. The total number of Marks gained by every Candidate, including both Preliminary and Optional Subjects, shall be added up, and the Candidates arranged in a printed list, at the close of the Examination, in the order of these totals. No Marks in any subject shall be counted unless the Candidate has gained at least the minimum number of Marks in that subject. The Marks in not more than three subjects of section 1, three subjects of section 2 and three subjects selected from sections 3 and 4 will be counted. Candidates not taking Latin or Greek may take four subjects from Sections 3 and 4.

6. Candidates who obtain at least *two-thirds* of the marks in any Optional Subject will be entitled to a Certificate of creditable answering in that Subject, provided they satisfy the conditions for either Associate in Arts or Junior Certificate.

7. In the case of those who pass in Latin, Greek, English, Algebra and Geometry, the examination will be received as the Matriculation Examination in the Faculties of Arts of the two Universities. In the case of those who have passed in Geometry, Algebra and English, the examination will be received for Matriculation in the Faculty of Applied Science of McGill University.

Candidates who fail, or who may be prevented by illness from completing their examinations, may come up at the next examination without extra fee, unless in the interval they have become disqualified by age, this disqualification not to apply in cases of illness duly certified by medical authority.

8. The Head Master or Mistress of each school must certify to the character and ages of the pupils sent up for examination.

9. The Examinations will begin on Monday, June 2nd, at 9 a.m.

10. Lists of the names, ages, and Optional Subjects to be taken by the candidates, together with the fee of $4, must be transmitted to the Secretary of McGill University on or before May 1st. (Blank forms and copies of the Regulations will be furnished on application.)

CLASSICAL SUBJECTS FOR 1885.

Latin.—Cicero, Cato Major.
Virgil, Æneid, Bk. I., vss.-1—304.
Horace, Odes, Bk. I., Odes 1 to 12, inclusive.

Greek.—Xenopnon, Anabasis, Bk. V
Homer, Iliad, Bk. IV.

Regulations for the Higher Examination of Women.

Under the Superintendence of McGill University, Montreal, and the University of Bishop's College, Lennoxville.

Women over sixteen years of age, who have already received the Senior or Junior Certificates of the University, or who present certificates of Education and examination accepted as equivalent by the Examiners, may enter on the following Examinations, and, on passing the same, shall be entitled to Certificates as Senior Associates in Arts.

The Examinations will be held at the same time and in the same manner with those for School Certificates, and local centres may be established on similar conditions.

The Examinations are divided into Imperative and Optional, as follows :—

I. IMPERATIVE.

These subjects consist of the following groups, in each of which every candidate will be required to take at least one-third of the number of marks.

(*a*) *Latin or Greek, with History.*

Latin and History.—

Tacitus :—Germania.
Cicero :—Pro Murena.
Virgil :—Æneid, Book VI.
Latin Prose Composition.—Text-book :—Dr. Smith's Principia Latina, Parts IV. and V.
History of Rome.—Text-book :—Liddell's History of Rome.

——200 marks.

Greek and History.—

Homer :—Odyssey, Book XII.
Xenophon :—Hellenics, Book I.
Lysias :—Contra Eratosthenem.
History of Greece.—Text-book :—Dr. Smith's History of Greece.

—— 200 marks.

Candidates may take either Greek or Latin.

(*b*) *Mathematics.*

Arithmetic.
Euclid, Bks. I. II. III. IV., Defs. of Bk. V., Bk. VI., omitting Props. 27, 28, 29.

Algebra, inclusive of Surds, Quadratic Equations and Progressions.
Plane Trigonometry, including the measurement of Heights and Distances, with the nature and use of Logarithms.

—— 200 marks.

(In the last subject, Candidates are referred to Galbraith and Haughton's Trigonometry, or similar text-books).

(*c*) *Logic and English.*

Logic, as in Jevons' Elementary Lessons.
Anglo-Saxon, as in Earle's Manual.
Philology, as in the introduction of Earle's Philology.
English History, as in Collier.

—— 200 marks.

II. OPTIONAL.

In addition to the above, Candidates must pass in at least one, and not more than three, of the following subjects, creditable answering in which will be mentioned in their certificates:

(*a*) *Chemistry.*

Inorganic, as in Roscoe, with some knowledge of Chemical Manipulation.

(*b*) *Botany.*

As in Gray's Text book, with some knowledge of Canadian Botany.

(*c*) *Mathematical Physics.*

Mechanics (Statics and Dynamics); Hydrostatics.
(Candidates are referred to Galbraith and Haughton's Mechanics and Hydrostatics, Hamblin Smith's Statics and Hydrostatics, or similar Text-books.

(*d*) *Experimental Physics.*

Any two of the following:—Heat, Light, Electricity and Magnetism, Sound.
(Candidates will be expected to shew in the Examinations that they have made the experiments themselves or have seen them made. For range of study, Candidates are referred to Ganot's Elementary Treatise on Physics, translated by Atkinson.)

(*e*) *Biology and Geology.*

Classification of Animals and Plants, as in Dawson's Handbook and Gray's Text-book.
Geology, as in Dana's Manual.
Palæontology, as in Nicholson's Manual.
A practical knowledge of Minerals, Rocks and Fossils will be expected.

(*f*) *Mental Philosophy.*

Thomson's Outlines of the Laws of Thought.
Murray's Outline of Hamilton's Philosophy, Introduction, and Part I. to the end of Chapter V.

(*g*) *English Literature and Ancient History.*

Chaucer—Prologue to Knight's Tale.
Shakespeare—Macbeth and Merchant of Venice.
Ancient History of the East—Lenormant and Chevalier.
History of Greece and Rome (if not taken in the imperative), as in Smith and Liddell.

(*h*) *French Language and Literature with Ancient History.*

French Syntax, as in De Fivas or Noel et Chapsal.
Molière, les Femmes savantes.
Racine, les Plaideurs.
Souvestre, un Philosophe sous les toits.
French Literature of the 17th and 18th centuries, as in Nisard, Précis de l'Histoire de la Litérature française.
Translation from English into French.
With History, as under (*g*).

(*i*) *German Language and Literature, with Ancient History.*

General questions on Grammar (Schmidt's German Guide, Parts 2 and 3.)
Account of the life and Principal Works of Goethe and Schiller, with a special study of Schiller's "Maria Stuart."
Adler's Progressive Reader, Nos. 5, 6, 8, 9, 12, 14 of Section IV.
Translation from English into German.
With History, as under (*g*).

(*k*) *Greek or Latin with History.*

If not taken in the imperative part of the Examination.

In the Optional Subjects, the Examinations held under the Ladies' Educational Association of Monereal, when held by Professors or Examiners of either University, and certified in writing by them as equivalent to Subjects stated above, may be accepted by the Examiners in any subject or portion of a subject.

In any of the Optional Subjects, Candidates must receive at least one-third of the marks in order to pass, and at least one half to receive mention of creditable answering.

(It is understood that the Optional Subjects will be reckoned as approximately of equal value.)

Successful Candidates will be arranged in the lists in the order of the aggregate of the marks which they have obtained in the whole of the Imperative subjects and one only of the Optional.

The Fee for the Examination is eight dollars, and must be paid before the Examination. In case of failure, the Candidate may come up at the next Examination without additional fee.

Candidates are required to state in writing to the Secretary of either University the Optional Subject or Subjects in which they propose to be examined, at not ease month before the date of the Examination.

McGill Normal School.

1883-84.

Under the Regulations for the establishment of Normal Schools in the Province of Quebec, the Superintendent of Education is empowered to associate with himself, for the direction of one of these Schools, the Corporation of McGill University, Montreal. In accordance with this arrangement the Provincial Protestant Normal School is affiliated with the McGill University, and the Vice-chancellor with four members of the Corporation of the University constitute the Committee of the Normal School.

Announcement for Next Session.

The Institution is intended to give a thorough training to teachers, especially for the Protestant population of the Province of Quebec. This end is attained by instruction and training in the Normal School itself, and by practice in the Model Schools; and the arrangements are of such a character as to afford the greatest possible facilities to Students from all parts of the Province.

The Twenty-sixth Session of this School will commence on the first of September, 1883, and will terminate on the first of July, 1884.

The complete course of Study extends over three years, and the Students are graded as follows:—

1. *Elementary School Class.*—Studying for the Elementary School Diploma.
2. *Model School Class.*—Studying for the Model School Diploma.
3. *Academy Class.*—Studying for the Academy Diploma.

For details as to courses of study and privileges of Students, see Appendix and also the separate Announcement, which may be obtained on application to the Principal, McGill Normal School, Belmont Street, Montreal.

Passed the University Examinations.

SESSION 1882-83,

FACULTY OF LAW.

PASSED FOR THE DEGREE OF B.C.L.

John E. Martin.
David C. Robertson.
John Fair, jr.
William E. Dickson.
Horace A. Hutchins.
Frederick Hague.
Henry Tucker.
Roderick D. Matheson.
Peter S. G. McKenzie.
Jean B. Demers.
Walter Hunter.
Arthur McConnell.
Lynn T. Leet.

PASSED FOR THE DEGREE OF D.C.L.

Gauthier, D. Z., B.C.L.....Sorel.

FACULTY OF MEDICINE.

PASSED FOR THE DEGREE OF M.D., C.M.

(Arranged Alphabetically.)

Allan, Clarence E.
Bowser, James C.
Cameron, Chas. E.
Carruthers, George
Dearden, George A.
Gardner, John J.
Gray, James.
Hanvery, Chas. B. H.
Harrisson, Henry J.
Henry, Wm. G
Hopkins, Alf. J.
Johnson, Jonathan R.
Lathern, J. Simpson.
Loring, J. Brown.
Maher, J. J. E.
Martel, Ovide.
McLeod, Arch., B.A. (McGill).
MacNeill, Alex.
MacLean, John W.
McDonald, Alexander
Muckey, F. S
Phippen, Samuel S. C.
Ross, Wm. K.
Rutledge, And. J.
Scott, Walter McE.
Shaver, Wm. H
Sihler, George A.
Stewart, Andrew.
Struthers, Robt. B.
Wood, Edward S.

PASSED THE PRIMARY EXAMINATION.

Allan, J. H. B.
Arthur, R. H.
Baird, T. A. D.
Barrett, J. A.
Burrows, F. N.
Cassidy, G. A.
Daly, W. D., B. A.
Darey, J. H., B.A. (McGill).
Eberts, D. W.
Ferguson, W. A., B.A. (McGill).
Finley, F. G.
Groves, W.
Hallett, E. O.
Hanna, A. E.
Harkin, Fred.
Hurdman, H. T.
Hutchison, J. A.
Irvine, R. T.
Johnson, C. H.
Johnson, H. D.
Jolliffe, J. H., B.A. (Union).
Klock, W. H.
Landor, T. H.
Merritt, D. P., B.A. (McGill).
McCormack, N.
McClure, W., B.A. (McGill).
McGannon, M. C.
McKenzie, J. T.
McLellan, J. H.
McMillan, D. L.
O'Brien, T.
Osborne, A. B.
Park, James.
Powell, F. H.
Robertson, A. M.
Ross, L. D.
Ruttan, R. F., B.A. (Toronto).
Scott, J. M.
Sharp, I. C.
Shibley, J. L., B.A. (Victoria).
Trapnell, H. E.
Wilson, J. A. K.
Wood, Ed. G.

FACULTY OF ARTS.

PASSED FOR THE DEGREE OF B.A.

In Honours.

(Alphabetically arranged.)

First Rank.—Barlow, Alfred E.
Bland, Charles E.
Cameron, John D.
Dixon, Wellington.
England, Luther M.
Lee, Archibald.
Murray, J. Ralph.
Porter, James A.

Ordinary.

(In order of Merit.)

(1) *McGill College.*

Class I.—Scrimger, Alexander.
Greenshields, Robert A.

Class II.—Ross, Lewis F.
Dickson, James A.
Kinnear, George. } equal.
Shearer, William K. }
O'Halloran, George F.
Fraser, William.
Hunter, Walter, B.C.L.

Class III.—Duffett, Henry J.
Richardson, Alexander W.

(2) *Morrin College.*

Class I.—Mackie, John F.
Brown, Albert J.
Ross, John T.
Class II.—None.
Class III.—McLeod, Norman.

PASSED THE INTERMEDIATE EXAMINATION.

(1) *McGill College.*

Class I.—McFarlane, James A.
Lochhead, William.
Climie, William.
Stewart, William G.
Martin, J. C.
McArthur, Archibald.
Class II.—McLean, John A.
Hargrave, Isaac L.
Calder, George F. } equal.
Ellis, John D. }
Blair, George A.
McLennan, George A.
Thompson, G. J. A.
Macvicar, J. Harvey.
Class III.—McLennan, Hugh S.
Colquhoun, Arthur.
Robertson, Philip M.
Currie, Walter T.
Budden, Hanbury.
Currie, Alexander.
Osborne, Alfred C.
Grant, Andrew S.
Higgins, Joseph H.
Roberts, W. D.

(2) *Morrin College.*

Class I.—Laurie, Archibald.
Home, W. A.
Walters, A. H.
Class II.—Silver, J. H.
Campbell, H.
Class III.—Ross, William C. A.

(3) *St. Francis College.*

Class I.—None.
Class II.—None.
Class III.—Parmelee, George.

BACHELORS OF ARTS PROCEEDING TO THE DEGREE OF M.A. IN COURSE.

CUNNINGHAM, THOMAS E., B.A.
CRAIG, JAMES A., B.A.
* KEAYS, CHARLES H., B.A.
NEWNHAM, JARVOIS A., B.A.
WHILLANS, ROBERT, B.A.

MASTER OF ARTS PROCEEDING TO THE DEGREE OF LL.D. IN COURSE.

ROY, JAMES, M.A.

ADMITTED "AD EUNDEM GRADUM."

GUIGNARD, J. A , B.A. (University of France).

FACULTY OF APPLIED SCIENCE.

PASSED THE EXAMINATION FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE

Civil Engineering (*Advanced course*).

Donaldson Bogart Dowling.

Civil Engineering (*Ordinary course*).

IN ORDER OF MERIT.

James McEvoy, Richard F. Smith.

Mining Engineering.

William Henry Howard.

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* *Granted "in absentia."*

SCHOLARSHIPS AND EXHIBITIONS.

FACULTY OF ARTS.

SESSION 1882–83.

I. SCHOLARSHIPS (Tenable for two years).

Year of Commencement.	Name of Scholar.	Subject of Examination.	Annual Value.	Founder or Donor.
1881	Murray, J. Ralph.	Mathematics.	$125	W. C. Macdonald
1881	Ross, Lewis F.	Natural Science.	$125	" "
1881	Bland, Charles E.	Class.&Mod. Lang	$125	" "
1881	Lee, Archibald.	Class.&Mod. Lang	$120	Chas. Alexander.
1882	Mackay, Adams A.	Mathematics.	$125	W. C. Macdonald.
1882	Blackader, Edw. H.	Natural Science.	$125	" "

II. EXHIBITIONS (Tenable for one Year).

Name of Exhibitioner.	Academic Year.	Annual Value.	Founder or Donor.
Lochhead, William.	Second Year.	$125	W. C. Macdonald.
Climie, William.	" "	$125	W. C. Macdonald.
Stewart, W. G.	" "	$125	George Hague.
Ritchie, Philip E.	First Year.	$125	W. C. Macdonald.
McRae, Duncan.	" "	$100	Jane Redpath.

ANNE MOLSON MATHEMATICAL PRIZE (September, 1882).

Murray, J. Ralph (Fourth Year Student).

FACULTY OF APPLIED SCIENCE.

FOURTH YEAR.

(1.) The Exhibition of $50 presented by A. T. Drummond, Esq. Obtained by Donaldson Bogart Dowling.

(2.) Mathematical Prize of $25, obtained by Donaldson Bogart Dowling.

THIRD YEAR.

(1.) The Scott Exhibition of $66, founded by the Montreal Caledonian Society in commemoration of Sir Walter Scott's centenary. Obtained by Cecil Brunswick Smith.

(2.) Mathematical Prize of $25, obtained by Cecil Brunswick Smith.

SECOND YEAR.

(1.) The Exhibition of $100, for Chemistry, presented by J. H. Burland, Esq. Obtained by Ernest McCourt Macy.

(2.) The Mathematical Prize of $25, obtained by Hedley Vicars Thompson.

The Prize in books to the value of $25, offered by Leslie Skelton, Esq., to students of the Third and Fourth years for the best Summer Report, has been awarded to Donaldson Bogart Dowling.

Prizes, Honours and Standing.

SESSION 1882-3.

FACULTY OF LAW.

GRADUATING CLASS.

FIRST RANK HONOURS AND ELIZABETH TORRANCE GOLD MEDAL.—JOHN E. MARTIN.

First Rank Honours and Prize, Prize for Thesis.—JOHN FAIR.

First Rank Honours and Second Prize.—D. C. ROBERTSON.

First Rank Honours.—W. E. DICKSON.

Prize for best Thesis.—H. A. HUTCHINS.

Standing in the Several Classes.

INTERNATIONAL LAW.—PROFESSOR KERR.

First, DICKSON, (Prize)
Second, HUNTER.

ROMAN LAW.—PROFESSOR TRENHOLME.

First, MARTIN.
Second, ROBERTSON.

CRIMINAL PROCEDURE.—PROFESSOR ARCHIBALD.

First, ROBERTSON.
Second, MARTIN.

LEGAL HISTORY.—PROFESSOR LARBAU.

First, MARTIN.
Second, DICKSON AND ROBERTSON, equal.

CIVIL PROCEDURE.—PROFESSOR HUTCHINSON.

First, FAIR.
Second, MCCONNELL AND MARTIN, equal.

CIVIL LAW.—PROFESSOR ROBIDOUX.

First, Dickson.
Second, Fair.

COMMERCIAL LAW.—PROFESSOR DAVIDSON.

First, Martin.
Second, Fair.

SECOND YEAR.

Passed the Sessional Examinations.—Alexander Falconer, B.A., Charles A. Duclos, B.A., Francis McLennan, B.A., Norman T. Rielle, B.A, John S. Buchan, Farquhar S. Maclennan, James Cullen, John H. Rogers, B.A., Kenneth R. Macpherson, B.A.

Prize for General Proficiency.—A. Falconer.

First Rank Honours.—A. Falconer, C. E. Duclos.

Second Rank Honours.—J. S. Buchan, F. McLennan, Norman T. Rielle.

Standing in the Several Classes.

INTERNATIONAL LAW.—Professor Kerr.

First, Falconer and Duclos, equal.
Second, Buchan.

ROMAN LAW.—Professor Trenholme.

First, Duclos.
Second, Falconer.

CRIMINAL LAW.—Professor Archibald.

First, F. S. Maclennan.
Second, Falconer.

LEGAL BIBLIOGRAPHY.—Professor Lareau.

First, Macpherson and Rielle, equal.
Second, Duclos.

CIVIL PROCEDURE.—Professor Hutchinson.

First, Falconer.
Second, F. S. Maclennan.

CIVIL LAW.—Professor Robidoux.

First Falconer and F. S. Maclennan, equal.
Second, Duclos and Rielle, equal.

COMMERCIAL LAW.—Professor Davidson.

First, Falconer.
Second, Duclos.

FIRST YEAR.

Passed the Sessional Examinations.—R. A. E. Greenshields, Arthur W. Smith, Roderick L. Murchison, Henry J Hague, James G. Jolly, George F. O'Halloran, Albert G. B. Claxton, Henry J. Duffett, Charles R. D'Aoust.

First Prize for General Proficiency.—R. A. E. Greenshields.

Second Prize for General Proficiency.—A. W. Smith.

First Rank Honours.—R. A. E. Greenshields, A. W. Smith, R. L. Murchison.

Second Rank Honours.—Henry J. Hague, J. G. Jolly, G. F. O'Halloran.

Standing in the Several Classes.

ROMAN LAW.—Professor Trenholme.

First, Greenshields.
Second, Murchison and Smith, equal.

CRIMINAL LAW.—Professor Archibald.

First, Smith.
Second, Duffett.

LEGAL BIBLIOGRAPHY.—Professor Lareau.

First, O'Halloran.
Second, Greenshields.

CIVIL PROCEDURE.—Professor Hutchinson.

First, Smith.
Second, O'Halloran.

CIVIL LAW.—Professor Robidoux.

First, Greenshields and Jolly, equal.
Second, Smith.

COMMERCIAL LAW.—Professor Davidson.

First, Smith.
Second, Hague.

THEORY AND PRACTICE OF NOTARIAL DEEDS AND INSTRUMENTS.—Professor Hart.

First, John Fair.
Second, E. C. Guy.
Third, E. W. H. Phillips.

FACULTY OF MEDICINE.

The Holmes Gold Medal.—C. E. Cameron, of Montreal.

Prize for the best Final Examination.—J. Brown Loring, of Sherbrooke, Q.

Prize for the best Primary Examination.—Edwin G. Wood, Lonsdeboro, O.

The Sutherland Gold Medal.—R. F. Ruttan, B.A., Napanee, O.

The Morrice Scholarship in Physiology.—R. F. Ruttan, B.A., Napanee, O.

Students deserving honourable mention.

In the Primary Examination, R. F. Ruttan, B.A., W. A. Ferguson, B.A., J. H. Darey, B.A., F. G. Finley, H. E. Trapnell, H. T. Hurdman, T. A. D. Baird, F. N. Burrows, M. C. McGannon, and Fred. M. Harkin.

n the Final Examination, Messrs. Struthers, Lathern, Bowser, Gray, Carruthers, Gardner, Henry, Scott and Johnson, J. R.

Professors' Prizes.

Botany.—Prize, Chas. W. Wilson, Cumberland, O., and J. A. Kinloch, Montreal.

For the best Collection of Plants.—H. E. Trapnell, Harbour Grace, Nfld.

Practical Anatomy.—Demonstrator's Prize, 2nd year F. G. Finley, of Montreal; 1st year, A. L. Howey, Eden, Ont.

Morrid Anatomy.—James Gray, of Brucefield, Ont., and C. E. Gooding, of Barbadoes, W. I.

FACULTY OF ARTS.

GRADUATING CLASS.

B.A. Honours in Mathematics and Natural Philosophy.

Murray, J. Ralph.—First Rank Honours and Anne Molson Gold Medal.

B.A. Honours in Classics.

Bland, Charles E.—First Rank Honours and Henry Chapman Gold Medal.
Lee, Archibald.—First Rank Honours.

B.A. Honours in Natural Science.

Porter, James A.—First Rank Honours, and Logan Gold Medal.
Barlow, Alfred E.—First Rank Honours.
England, Luther M.—First Rank Honours.

B.A. Honours in Mental and Moral Philosophy.

Cameron, John D.—First Rank Honours and Prince of Wales Gold Medal.

B.A. Honours in English Language, Literature and History.

Dixon, Wellington.—First Rank Honours and Shakespeare Gold Medal.

Special Certificates.

Scrimger, Alex.—Special Certificate of First Class General Standing.
Greenshields, Robt. A.—Special Certificate of First Class General Standing.

THIRD YEAR.

MACKAY, A. A.—First Rank Honours and Prize in Mathematical Physics; First Rank General Standing; Prize in Latin.

MABON, JAS.—First Rank Honours in Mental and Moral Philosophy and Prize; First Rank General Standing; Prize in Zoology; Prize for Collection of Plants.

RONDEAU, S.—First Rank Honours in Modern Languages and Prize; First Rank General Standing.

CAMERON, K.—First Rank Honours in Natural Science.

UNSWORTH, J. K.—First Rank Honours in English Literature and History.

TURNER, W. H.—First Rank Honours in English Literature and History.

ROGERS, GEORGE.—Second Rank Honours in Natural Science.

MASSÉ, GODEFROI.—First Rank General Standing; Prize in Zoology.

MARCEAU, JAS.—First Rank General Standing; Prize in French.

CHRISTIE, WM.—First Rank General Standing.

BLACKADER, E. H.—Prize for Collection of Plants.

KIRKPATRICK, R. C.—Prize for Collection of Plants.

PASSED THE SESSIONAL EXAMINATIONS.

Mackay, Massé, Rondeau, Marceau; Christie and Mabon, equal; Kennedy; Haythorne and Parent and Unsworth, equal; Wright, Turner, Larivière, Kirkpatrick; Cameron (K.) and Pedley, equal; Blackader, Rogers, Gerrie.

SECOND YEAR.

CLIMIE, WILLIAM.—(Listowel High School, O.)—First Rank Honours and Prize in Mathematics; First Prize in Logic; First Prize in English; First Rank General Standing.

LOCHHEAD, WM.—(Listowel High School, O.)—Second Rank Honours in Mathematics; Second Prize in English; First Rank General Standing.

MCFARLANE, J. A.—(Portage du Fort School)—First Rank General Standing; Prize in Hebrew and Stewart Prize in Hebrew.

STEWART, W. G.—(Lachute Collegiate Institute).—First Rank General Standing; Prize in Botany.

MARTIN, J. C.—(Private Tuition).—First Rank General Standing; Second Prize in Logic.

PASSED THE SESSIONAL EXAMINATIONS.

McFarlane, Lochhead, Climie, Stewart, Martin, McArthur, McLean (J.C.), Hargrave; Calder and Ellis, equal; Blair, McLennan, (G. A.), Thompson, Macvicar, McLennan (H. S.), Colquhoun, Robertson, Currie (A.), Osborne, Currie (W. T.), Budden, Grant, Higgins, Robert.

FIRST YEAR.

MACDOUGALL, JOHN.—(Huntingdon Academy, Q.)—First Rank Honours and Prize in Mathematics; First Rank General Standing.

KERRY, J. G.—(High School, Montreal).—First Rank General Standing.

PATTERSON, WM.—(Huntingdon Academy, Q.)—First Rank General Standing; Prize in Classics.

LIVINGSTONE, C. H.—(City Grammar School, St. John, N.B.).—First Rank General Standing; Prize in English; Prize in Chemistry.

SWABEY, C.—(St. Peter's School, Charlottetown.)—First Rank General Standing.

MACRAE, D. N.—(St. Catharines, Ont.)—First Rank General Standing.

RITCHIE, P. E.—(High School, Montreal).—Prize in Classics; Prize in French; Prize in German.

ROCHESTER, W. M.—(Ottawa Collegiate Institute).—Prize in Classics.

SPARLING, WM.—(Renfrew School).—Prize in Hebrew.

PASSED THE SESSIONAL EXAMINATIONS.

Kerry, Patterson, Macdougall, Livingstone, Swabey, McRae, Ritchie, Rochester, McOuat, Sparling, Wallace, Clerk, McKercher, Chalmers, Hibbard, Pedley; Fyles and Stevenson, equal; Thomas, Dewar, Holden (E. D. F.), Bell, Craig, Clements, Dalpé, Sanders.

Aeger.—Evans (W. H.).

At the Examinations in September, 1882, the following *Scholarships* and *Exhibitions* were awarded:

SCHOLARSHIPS—TENABLE FOR TWO YEARS.

THIRD YEAR.—Mathematical Scholarship, *Mackay (A. A.).

THIRD YEAR.—Natural Science Scholarship, *Blackader (E. H.).

EXHIBITIONS—TENABLE FOR ONE YEAR.

SECOND YEAR.—*Lochhead, W. (Listowel High School); *Climie, W. (Listowel High School); †Stewart (W. G.).

FIRST YEAR.—*Ritchie, P. E. (High School, Montreal); ‡McRae, D. (St. Catharines School, Ont.).

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*Value of Scholarship or Exhibition, $125 yearly; founder, W. C. Macdonald, Esq.

†Value, $125 yearly; donor, George Hague, Esq.

‡Value, $100 yearly; founder, Mrs. Jane Redpath.

ANNE MOLSON MATHEMATICAL PRIZE.

In September 1882, the *Anne Molson Mathematical Prize* was awarded, after a special Examination, to J. Ralph Murray (Student of the Fourth Year).

NEW SHAKSPERE SOCIETY'S PRIZE.

On the merits of an examination held in January, 1883, the New Shakspere Society's Prize was awarded to Alexander Scrimger (4th Year).

SESSIONAL EXAMINATIONS.

GREEK.

B. A. ORDINARY.—*Class I.*—Bland, Lee, Scrimger. *Class II.*—Shearer. *Class III.*—Richardson.

THIRD YEAR.—*Class I.*—Mabon and Unsworth, equal; Massé; Christie and Parent, equal; Haythorne and Pedley (Jas. W.), and Rondeau, equal. *Class II.*—Marceau, Larivière. *Class III.*—Cameron, (Kenneth), Gerrie.

SECOND YEAR.—*Class I.*—McLean (Jno. A.), McFarlane; Climie and Lochhead, equal; McArthur, Stewart, Martin. *Class II.*—Thompson; Blair and Calder, equal: Currie (Alex.), Macvicar, McLennan (Hugh S.). *Class III.*—McLennan (Geo. A.), Grant, Watson, Ellis; Hargrave and Higgins, equal; Colquhoun and Currie (W. T.) and Osborne, equal; Budden and Robertson, equal; Cameron (Donald) and Roberts, equal.

FIRST YEAR.—*Class I.*—Patterson (*Prize*) and Ritchie and Rochester (*Prize*), equal; McOuat, McRae, Chalmers, Swabey, McKerchar. *Class II.*—Fyles, Kerry, Macdougall, Hibbard, Pedley (Francis); Evans and Sanders and Sparling, equal. *Class III.*—Livingstone and Dalpé, equal; Thomas, Clerk, Internoscia; Holden (E. D. F.) and Wallace, equal; Bell; Ogilvie and Dewar, equal; Craig, McLean (Donald), Stevenson.

LATIN.

B. A. ORDINARY.—*Class I.*—Bland, Lee, Shearer. *Class II.*—Ross, (Lewis F.), Hunter, Kinnear. *Class III.*—Dickson, Duffett, Fraser.

THIRD YEAR.—*Class I.*—Mackay (*Prize*), Haythorne; Christie and Wright, equal. *Class II.*—Parent, Kennedy, Kirkpatrick. *Class III.*—None.

SECOND YEAR.—*Class I.*—McLean (Jno. A.), Lochhead; Climie and McFarlane, equal; Blair, McArthur. *Class II.*—Stewart; Martin and Thompson, equal; Macvicar, Calder, McLennan (Geo. A.); Budden and Hargrave, equal. *Class III.*—McLennan (H. S.) and Osborne, equal; Watson, Currie (Alex.), Ellis; Grant and Robertson, equal; Colquhoun, Higgins, Cameron (Don.); Currie (W. F.) and Roberts, equal.

FIRST YEAR.—*Class I.*—Ritchie (*Prize*); Patterson and Rochester and Swabey, equal; McKerchar and McRae, equal; Chalmers and Macdougall, equal; Fyles, Hibbard, Pedley (F.), Sparling. *Class II.*—Kerry; Clerk and Evans and McOuat, equal; Livingstone and Thomas, equal. *Class III.*—Sanders, Wallace; Clements and Internoscia, equal; Dalpé and Dewar, equal; Bell and Stevenson, equal; Craig; Holden (E. D. F.) and McLean (Don.), equal.

Honour Examinations in Classics.

B. A. *First Rank.*—Bland (Charles F.) (*Henry Chapman Gold Medal*) Lee, Archibald.

GREEK AND ROMAN HISTORY.

FIRST YEAR.—*Class I.*—Kerry and McRae and Sparling and Swabey, equal; Macdougall and McOuat, equal; Clements and Livingstone and Patterson, equal; Fyles, Dewar, Ritchie, Rochester, Internoscia. *Class II.*—McKerchar and Dalpé, equal; Holden (E. D. F.) and Stevenson, equal; Chalmers and Clerk and Pedley (F.) and McLean (Don.), equal; Wallace; Evans and Hibbard and Sanders and Thomas, equal; Craig and Ogilvie, equal. *Class III.*—Bell.

MENTAL AND MORAL PHILOSOPHY AND LOGIC.

B. A. ORDINARY.—(*Moral Philosophy*).—*Class I.*—Scrimger, Greenshields, Cameron (J. D.). *Class II.*—O'Halloran and Ross (L. F.), equal; Kinnear, Fraser, Dickson. *Class III.*—Duffett.

Passed in Class II.—Shearer.

B. A. ORDINARY.—(*Additional Department in Mental and Moral Philosophy*).—*Class I.*—Scrimger.

THIRD YEAR.—(*Additional in Mental Philosophy.*)—*Class II.*—Mabon. *Class III.*—Pedley, Gerrie, Emory.

SECOND YEAR.—(*Logic*).—*Class I.*—Climie, McLennan (H. S.) *Class II.*—Budden and McArthur, equal; Lochhead; Calder and McFarlane and Martin, equal; Osborne, Hargrave, Blair, Stewart. *Class III.*—Currie (A.) and Ellis, equal; Thompson, Currie (W. T.), Macvicar, Whyte; McLean and McLennan (G. A.), equal; Colquhoun; Higgins and Roberts, equal; Robertson. *First Prize.*—Climie. *Second Prize.*—Martin.

Honours in Mental and Moral Philosophy.

B. A.—*First Rank.*—Cameron (J. D.) (*Prince of Wales Gold Medal*).

THIRD YEAR.—*First Rank.*—Mabon (*Prize*).

RHETORIC AND ENGLISH LITERATURE.

THIRD YEAR.—*Class I.*—Turner, Unsworth, Pedley. *Class II.*—Christie, Rondeau, Kennedy, Gerrie. *Class III.*—Cameron, Blackader.

HISTORY.

B. A. ORDINARY.—*Class I.*—Dixon and Scrimger, equal; Shearer; Greenshields and Kinnear, equal. *Class II.*—O'Halloran and Dickson, equal; Duffett.

ENGLISH LITERATURE AND HISTORY.

SECOND YEAR.—*Class I.*—Climie (*First Prize*), Lochhead (*Second Prize*); McFarlane and Colquhoun, equal; Stewart; Martin; and McArthur, equal; Watson, McLennan (G. A.). *Class II.*—Blair, Currie (A.), Hargrave. *Class III.*—Ellis, McLean (J. A.), Macvicar; Currie (W. T.) and Thomas, equal; Robertson; Budden and Calder, equal; Osborne, Higgins, McLennan (H. S.), Roberts, Grant, Cameron (D.).

FIRST YEAR.—*Class I.*—Livingstone (*Prize*); Kerry and McDougall, equal; Swabey, McRae, Rochester; Clerk and McOuat and Patterson, equal; Stevenson. *Class II.*—Ritchie; Evans (W. H.) and McKerchar, equal; Pedley, Whyte. *Class III.*—Chalmers; Dalpé and Thomas, equal; Wallace, Hibbard; Dewar and Fyles, equal; Clements and Holden (E. D. F.), equal; Sparling, Bell, Craig, Sanders; McLean (D.)

FRENCH.

THIRD YEAR.—*Class I.*—Rondeau, Massé, Larivière, Mabon, Marceau; Christie and Turner and Parent, equal. *Class II.*—Wright, Kirkpatrick. *Class III.*—Blackader.

THIRD YEAR.—(*Additional Department*).—*Class I.*—Rondeau (*Prize*), Marceau (*Prize*); Larivière and Massé, equal. *Class II.*—None. *Class III.*—None.

THIRD YEAR.—

SECOND YEAR.—*Class I.*—None. *Class II.*—Thompson, McArthur; McLean and Stewart, equal; Blair and Calder, equal. *Class III.*—Macvicar; Colquhoun and McLennan (G. A.) and Pinel, equal; Lochhead, Hargrave, Watson, McLennan (H. S.), Robertson.

FIRST YEAR.—*Class I.*—Ritchie (*Prize*), Dalpé, Thomas, Clements, Swabey; Chalmers and Patterson, equal; Clerk, Hibbard, Livingstone. *Class II.*—McDougall and McOuat, equal; Kerry, Ogilvie, Evans, Fyles. *Class III.*—Holden (E. D.), McRae, Monroe, Cross, Pedley; Craig and Rochester, equal; Robinson, McKerchar, Bell.

GERMAN.

B. A. ORDINARY.—*Class I.*—Scrimger (*Prize*).

FOURTH YEAR.—*Class I.*—Gregor (L. R.), B.A., Internoscia.

SECOND YEAR.—*I. Division.—Class I.*—Thompson. *II. Division.—Class II.*—McLean (J. A.).

FIRST YEAR.—*Class I.*—Ritchie (*Prize*). *Class II.*—Thomas.

HEBREW.

JUNIOR CLASS.—*Class I.*—Sanders (Wm.) Sparling (Wm.), Stevenson (J. H.). *Class II.*—Wallace (W. E.), Dewar (D. L.). *Class III.*—Ross (H.), Hodges (D.).

SENIOR CLASS.—*Class I.*—McFarlane (J. A.) (*Prize*), Marvin (G. W.), Ellis J. D.). *Class II.*—Hargrave (T. L.) and Martin (J. C.), equal; Campbell (J. C.). *Class III.*—Currie (W. T.), Grant (A. S.), Higgins (J. H.), Roberts (W. D.), Cameron (D.).

Passed.—*Class I.*—Osborne.
Passed.—*Class II.*—Currie (A.).

OPTIONAL COURSE.—*Class I.*—Lee (A.) (*Prize*), Fraser (Wm.). *Class II.*—None. *Class III.*—None.

NEIL STEWART PRIZE.—McFarlane (J. A.).

ASTRONOMY AND OPTICS.

B. A. ORDINARY.—*Class I.*—Murray, Greenshields; Dickson and Kinnear, equal. *Class II.*—O'Halloran, Duffett. *Class III.*—Cameron (J. D.).

THIRD YEAR.—*Class I.*—Mackay, Wright; Marceau and Massé, equal. *Class II.*—Kirkpatrick, Blackader.

MECHANICS AND HYDROSTATICS.

B. A. ORDINARY.—*Class I.*—Murray, Greenshields, Fraser. *Class II.*—O'Halloran, Cameron (J. D.). *Class III.*—Dickson (J. C.), Hunter, Richardson.

THIRD YEAR.—*Class I.*—Mackay, Massé; Haythorne and Kennedy, equal; Christie and Marceau and Parent, equal; Kirkpatrick. *Class II.*—Mabon; Cameron (K.) and Rogers, equal; Wright and Turner, equal. *Class III.*—Blackader.

TRIGONOMETRY AND ALGEBRA.

SECOND YEAR.—*Class I.*—Climie and Lochhead, equal; McFarlane, Cameron; Martin and Stewart, equal; McLennan (G. A.), McArthur; Calder and Ellis, equal. *Class II.*—Budden, Hargrave. *Class III.*—Thompson, Currie (W. T.), McLean (J. A.), Macvicar, Blair, Grant, Colquhoun, Currie (A.), McLennan (H. S.), Robertson, Osborne.

FIRST YEAR.—*Class I.*—Kerry, Rochester, Patterson; Livingstone and Wallace, equal; McRae. *Class II.*—Ritchie; Macdougall and McOuat, equal; Hibbard. *Class III.*—Clements; Clerk and Sparling, equal; McKerchar, Holden (E. D.), Pedley, Dewar, Swabey, Ogilvie, Stevenson, Thomas; Sparling and Ross, equal; McLean (D.), Fyles; Bell and Chalmers, equal; Craig.

GEOMETRY AND ARITHMETIC.

SECOND YEAR.—*Class I.*—McLean (J. A.), Lochhead, Climie; Ellis and McFarlane, equal; Blair and Cameron and Stewart, equal; Hargrave. *Class II.*—Calder; McArthur and Martin, equal; McLennan (H. S.), Currie (A.), Thompson, Macvicar. *Class III.*—Grant; Colquhoun and McLennan (G. A.) and Osborne, equal; Currie (W. T.), Budden, Robertson, Higgins, Roberts.

FIRST YEAR.—*Class I.*—Patterson, Kerry, Macdougall. *Class II.*—Livingstone, Ritchie, Wallace. *Class III.*—Hibbard; McOuat and Stevenson, equal; Craig and Holden (E. D.), equal; Swabey, Sparling; McKerchar and McRae, equal; Bell, Chalmers; Clerk and Pedley, equal; Rochester, Dalpé, Fyles, Thomas; Carmichael and Dewar, equal; Clements, Ogilvie, Sanders, McLean (D.), Internoscia.

EXPERIMENTAL PHYSICS.

B. A. ORDINARY.—*Class I.*—Murray, Bland, Greenshields, O'Halloran. *Class II.*—Richardson, Hunter; Duffett and Ross, equal; Dixon (W.); Dickson (J. C.) and England and Kinnear, equal. *Class III.*—Barlow, Fraser, Porter.

THIRD YEAR.—*Class I.*—Mackay; Blackader and Kennedy, equal. *Class II.*—Parent; Kirkpatrick and Wright, equal. *Class III.*—Rogers, Haythorne.

HONOUR EXAMINATIONS IN MATHEMATICS AND NATURAL PHILOSOPHY.

B. A.—*First Rank Honours and Anne Molson Gold Medal.*—Murray (J. R.).

THIRD YEAR.—*First Rank Honours and Prize.*—Mackay (A. A.).

SECOND YEAR.—*First Rank Honours and Prize.*—Climie (W.).

Second Rank Honours.—Lochhead.

FIRST YEAR.—*First Rank Honours and Prize.*—McDougall (J).

NATURAL SCIENCE.

B. A. ORDINARY.—(*Geology and Mineralogy*).—*Class I.*—Porter, England, Barlow. *Class II.*—Hunter, Ross, Richardson, Emory, Shearer.—(*Geology* alone). *Class II.*—Campbell.

B. A. ORDINARY.—(*Additional Department, Geology and Mineralogy*).—*Class I.*—Ross. *Class II.*—Hunter, Richardson.

THIRD YEAR.—(*Zoology and Palæontology*).—*Class I.*—Mabon and Massé equal (*Prize*); Cameron. *Class II.*—Unsworth, Blackader Marceau, Gerrie, Rogers, Pedley. *Class III.*—Larivière.

THIRD YEAR.—(*Additional Department, Chemistry and Palæontology.*)—*Class I.*—None. *Class II.*—Rogers, Cameron.

SECOND YEAR.—(*Botany*).—*Class I.*—Stewart (*Prize*) ; Climie and Martin equal ; Hargrave and Currie (W. T.), equal ; McArthur, Macfarlane, McLennan (G. A.), Lochhead. *Class II.*—Calder-Budden, Macvicar, Jamieson. *Class III.*—McLean (J. A.) and Ellis, equal ; Groulx (Vilda J.) and Robertson, equal ; McLennan (H. S.), Colquhoun, Cameron, Blair, Clarke, Roberts, Grant, Currie (A.), Osborne, Speer, Thompson, Higgins.

CHEMISTRY.

FIRST YEAR.—*Class I.*—Livingstone (*Prize*), Macdougall, Swabey, Kerry, Anderson (Oc.), McRae. *Class II.*—Clerk and Wallace, equal ; McOuat, Clements, Sparling, Rochester, Holden (E. D. F.). *Class III.*—Dewar, Patterson, Dalpé, Evans, Thomas, Pedley, Internoscia ; Bell and Ritchie, equal ; Stevenson, Chalmers, McKerchar, Fyles, Hibbard, Craig.

PRIZES FOR COLLECTIONS OF PLANTS :—
Professor's Prize.—Mabon (James).
Prizes from Logan Medal Fund.—Blackader (E. H.), Kirkpatrick (R. C.).

HONOUR EXAMINATIONS IN NATURAL SCIENCE.

THIRD YEAR.—*First Rank Honours.*—Cameron (K.).
Second Rank.—Rogers (G.).

B. A.—*First Rank Honours and Logan Gold Medal.*—Porter (J. A.).
First Rank Honours.—Barlow (A. E.), England (L. M.)

MORRIN COLLEGE.

B.A. ORDINARY.

Special Certificates of First Class General Standing.
MACKIE, JOHN F.
BROWN, ALBERT J.
ROSS, JOHN T.

GREEK.—*Class I.*—Ross, John T. *Class II.*—McLeod. *Class III.*—None.

LATIN.—*Class I.*—Mackie ; Brown and Ross (Jno. T.), equal. *Class* II.—None. *Class III.*—McLeod.

MECHANICS AND HYDROSTATICS.—*Class I.*—Brown. *Class II.*—Mackie and Ross, equal. *Class III.*—McLeod.

MORAL PHILOSOPHY.—*Class I.*—Mackie, Brown. *Class II.*—Ross (J. T.) *Class III.*—McLeod.

HISTORY.—*Class I.*—Mackie, Ross (J. T.), Brown. *Class II.*—None. *Class III.*—McLeod.

FRENCH.—*Class I.*—Mackie, Ross, Brown. *Class II.*—None. *Class. III.*—McLeod.

FRENCH.—(*Additional Department*).—*Class I.*—Brown, Mackie. *Class II.*—None. *Class III.*—None.

INTERMEDIATE EXAMINATION.

GREEK.—*Class I.*—Laurie and Walters, equal; Home; Campbell and Silver, equal. *Class II.*—None. *Class III.*—Ross, Wm. C.

LATIN.—*Class I.*—Home;—Campbell and Laurie, equal; Walters, Silver. *Class II.*—Ross, Wm. C. *Class III.*—None.

GEOMETRY AND ARITHMETIC.—*Class I.*—Laurie, Home, Silver. *Class II.* Campbell, Walters. *Class III.*—Ross.

TRIGONOMETRY AND ALGEBRA.—*Class I.*—Walters, Laurie, *Class II.*—Silver, Home, Campbell, Ross. *Class III.*—None.

LOGIC.—*Class I.*—Home. *Class II.*—Laurie, Walters, Silver. *Class III.*—Campbell (H.), Ross (W. C. A.).

ENGLISH LITERATURE AND HISTORY.—*Class I.*—Home; Campbell and Ross (W. A. C.) and Laurie, equal. *Class II.*—Walters, Silver.

FRENCH.—*Class I.*—Laurie, Silver. *Class II.*—Home, Campbell, Walters. *Class III.*—Ross.

ST. FRANCIS COLLEGE.

INTERMEDIATE EXAMINATION.

GREEK.—*Class III.*—Parmelee.
LATIN.—*Class III.*—Parmelee.
GEOMETRY AND ARITHMETIC.—*Class II.*—Parmelee.
TRIGONOMETRY AND ALGEBRA.—*Class II.*—Parmelee.
LOGIC.—*Class III.*—Parmelee.
ENGLISH LITERATURE AND HISTORY.—*Class I.*—None. *Class II.*—None.—*Class III.*—Parmelee.
FRENCH.—*Class I.*—None. *Class II.*—None. *Class III.*—Parmelee.

SUPPLEMENTAL EXAMINATIONS, 1882–83.

PASSED.

I.—September, 1882.

(*a*)—Supplemental Sessional Examinations.

FIRST YEAR.—Climie, Roberts, Robertson, P. M., Currie W. T.

(*b*)—Supplemental in one Subject.

SECOND YEAR.—Cameron K., Lariviere D., Turner.

II.—February, 1883.

(Supplemental to Christmas Examinations.)

(*a*)—Supplemental in two or more subjects.

SECOND YEAR.—Budden, Higgins, McFarlane, Cameron D., Currie (A.), Colquhoun.

FIRST YEAR.—Fyles.

(*b*)—Supplemental in one Subject.

SECOND YEAR.—Grant, McLennan (G. F.), Maevicar J. H., Roberts, Robertson.

FIRST YEAR.—Craig, Macdougall.

FACULTY OF APPLIED SCIENCE.

GRADUATING CLASS.

Donaldson Bogart Dowling—Lorne Medal; $50 exhibition; Leslie Skelton Prize; $25 Mathematical Prize; Certificates of Merit in Applied Mechanics, Mathematics, Designing, Hydraulics, Bridge-Construction, Thermo-Dynamics and theSteam-Engine.

William Henry Howard.—First Rank Honours in Natural Science; Certificate of Merit in Assaying.

THIRD YEAR.

CECIL BRUNSWICK SMITH.—The Scott Exhibition; Mathematical Prize of $25; Prizes in Mathematics, Experimental Physics, Descriptive Geometry, Surveying, Applied Mechanics and Materials.

DAVID OGILVY.—Prizes in Mathematics, Surveying and Geology.

WILLIAM GRAHAM.—Prize in Mechanical Work.

PASSED THE SESSIONAL EXAMINATIONS.

Civil Engineering (*Advanced course*).

IN ORDER OF MERIT.

Cecil Brunswick Smith, David Ogilvy, John McDonald.

Civil Engineering (*Ordinary course*).

IN ORDER OF MERIT.

John M. McKenzie, Allan R. Davis, John L. Hislop.

Mechanical Engineering.

IN ORDER OF MERIT.

William Graham, Duncan Donald McTaggart.

Mining Engineering.

Joseph Alfred Robert.

Practical Chemistry.

Edward Henry Hamilton.

SECOND YEAR.

HEDLEY VICARS THOMPSON.—Mathematical Prize of $25; Prizes in Descriptive Geometry, Surveying, Mechanism and Mathematics.

ERNEST MCCOURT MACY.—The Burland Exhibition of $100; Prizes in Mathematics and Practical Chemistry.

CHARLES WILLIAM TRENHOLME.—Prize in Mathematics.

EDWARD PAYSON MATHEWSON.—Prizes in Zoology and Experimental Physics.

SAMUEL FORTIER.—Prizes in Materials and French.

PASSED THE SESSIONAL EXAMINATIONS.

Civil Engineering.

IN ORDER OF MERIT.

Hedley Vicars Thompson, Samuel Fortier, Samuel Henry Pitcher.

Mining Engineering.

IN ORDER OF MERIT.

Charles William Trenholme, Ernest McCourt Macy, Edward Payson Mathewson.

FIRST YEAR.

NEVIL NORTON EVANS.—Prizes in Mathematics and French.

ARTHUR WEIR.—The Burland Prize in Chemistry.

WALTER FREDERICK FERRIER.—Prizes in Freehand Drawing and Chemistry.

PASSED THE SESSIONAL EXAMINATIONS.

IN ORDER OF MERIT.

Nevil Norton Evans, Walter Frederick Ferrier, Arthur Weir, Charles Percy Brown; George Herbert Dawson and Thomas William Watson, equal; Daniel Taylor, William Cyrus Perkins.

STANDING IN SPECIAL SUBJECTS.

ESSAYS PREPARED DURING THE SUMMER OF 1882.

FOURTH YEAR.—*Class I.*—Dowling (*Division D, of the O. and Q. Ry*), Moffatt (*Roads and Streets*), Smith, R. F. (*Grip-Car System of Tramways*), Howard (*The Carillon Dam*). *Class II.*—McEvoy (*The Manufacture of White Bricks*).

THIRD YEAR.—*Class I.*—Smith, C. B. (*The Welland Canal and the New Locks*); Forlong (*The Carillon Dam*) and McDonald (*Applied Science*) and McKenzie (*The Construction of Dams*) and Ogilvy *Railway Location from Aylmer to Quio*), equal; Davis (*The Iron*

and Gold Mines of North Hastings, O.) and Graham (*Pumping Machinery, Longueuil Water Works*) and Hislop (*Railway Location from Dundee to Huntingdon*) and Robert (*The Mines and Economic Minerals of Cape Breton*), equal. *Class II.*—McTaggart (*Drills*). *Class III.*—Walters (*Timber*), Hamilton (*Arsenic and its Detection*).

SECOND YEAR.—*Class I.*—Macy (*Rockland Slate*), Reid (*The Lathe*). *Class II.*—Routhier (*Dominion Land Surveys*), Burns (*Steam Boiler Appendages*); Mignault (*Sugar*) and Roy (*Survey of Site of Dominion Bridge Co.'s Works*) equal. *Class III.*—Mathewson (*The Manufacture of Soap*); McCarthy (*Metals*) and Pitcher (*Timber*) equal.

DESCRIPTIVE GEOMETRY.

THIRD YEAR.—*Class I.*—Smith, C. B. (*Prize*). *Class II.*—Ogilvy, McDonald *Class III.*—Graham, Hislop, McKenzie.

SECOND YEAR.—*Class I.*—Thompson (*Prize*). *Class II.*—Macy and Trenholme, equal; Fortier; Mathewson and Pitcher, equal. *Class III.*—Ferrier, (1st Year); Lesage, Mignault, Roy.

FREEHAND DRAWING.

FIRST YEAR.—*Class I.*—Ferrier (*Prize*); Brown and Evans, equal; Shearer. *Class II.*—Weir, Molson, Hutchison. *Class III.*—Dawson and Watson, equal; Taylor; Costigan and Perkins, equal; May.

SURVEYING.

THIRD YEAR.—*Class I.*—Ogilvy and Smith (C. B)., equal (*Prize*). *Class II.*—McDonald. *Class III.*—Hislop and McKenzie equal; Davis.

SECOND YEAR.—*Class I.*—Thompson (*Prize*), Trenholme. *Class II.*—Fortier, Routhier. *Class III.*—Macy; Mathewson and Roy, equal; Pitcher.

MECHANISM.

SECOND YEAR.—*Class I.*—Thompson (*Prize*), Fortier. *Class II.*—Macy, Mathewson. *Class III.*—Trenholme, Pitcher, Routhier.

MACHINERY AND MILLWORK.

THIRD YEAR.—GEOMETRY OF MACHINERY.—*Class I.*—None. *Class II.*—Graham. *Class III.*—McTaggart.

DYNAMICS OF MACHINERY.—*Class I.*—Graham. *Class II.*—McTaggart.

MECHANICAL WORK.

SECOND AND THIRD YEARS.—*Class I.*—Graham (*Prize*). *Class II.*—None. *Class III.*—McTaggart, Dagron; Burns and Reid, equal.

MATERIALS.

FOURTH YEAR.—*Class I.*—Dowling (*Certificate of Merit*), McEvoy, Smith (R. F.). *Class II.*—Howard.

THIRD YEAR.—*Class I.*—Smith (C.B.) (*Prize*), McKenzie, Ogilvy, McDonald *Class II.*—Hislop, Davis, McTaggart, Forlong, Robert, Graham. *Class III.*—Walters.

SECOND YEAR.—*Class I.*—Fortier (*Prize*), Burns. *Class II.*—Lesage, Thompson, McCarthy, Dagron. *Class III.*—Routhier and Roy, equal; Reid, Pitcher.

APPLIED MECHANICS.

FOURTH YEAR.—*Advanced Course.*—Dowling.
Ordinary Course.—Class I.—Dowling (*Certificate of Merit*). *Class II.*—McEvoy and Smith (R. F.), equal.

THIRD YEAR.—*Advanced Course.*—Ogilvy and Smith (C. B.), equal; McDonald.

Ordinary Course.—Class I.—Smith (C. B.) (*Prize*), Ogilvy. *Class II.*—Graham, McDonald. *Class III.*—McKenzie, Davis, McTaggart, Robert.

BRIDGE CONSTRUCTION.

FOURTH YEAR.—*Class I.*—Dowling (*Certificate of Merit*). *Class II.*—Smith. (R. F.) McEvoy.

THIRD YEAR.—*Class I.*—Smith (C. B.). *Class II.*—McDonald, Ogilvy, Graham. *Class III.*—Davis, McTaggart, McKenzie, Robert, Walters, Hislop.

DESIGNING.

FOURTH YEAR.—*Class I.*—Dowling (*Certificate of Merit*), McEvoy. *Class II.*—Smith (R. F.). *Class III.*—Howard.

HYDRAULICS.

FOURTH YEAR.—*Advanced Course.*—Dowling.
Ordinary Course.—Class I.—Dowling, (*Certificate of Merit*). *Class II.*—Smith (R. F.), McEvoy. *Class III.*—Howard.

THERMO-DYNAMICS AND THE STEAM-ENGINE.

FOURTH YEAR.—*Advanced Course.*—Dowling.
Ordinary Course.—Class I.—Dowling (*Certificate of Merit*) *Class II.*—McEvoy, Smith (R. F.). *Class. III.*—Howard.

ASSAYING.

THIRD AND FOURTH YEARS.—*Class I.*—Howard. *Class II.*—Hamilton, Murray (occ.)

MINING.

THIRD AND FOURTH YEARS.—*Class I.*—None. *Class II.*—Howard, Robert Murray (occ).

PRACTICAL CHEMISTRY.

SECOND AND THIRD YEARS.—MINING COURSE.—*Class I.*—Macy, (*Prize*). Trenholme. *Class II.*—Murray (occ.), Mignault, Mathewson, Robert.

FIRST YEAR.—*Class I.*—Ferrier (*Prize*), Weir, Perkins, Watson. *Class II.*—Dawson, Evans, Taylor, Brown.

THIRD YEAR.—PRACTICAL CHEMISTRY COURSE.—*Class I.*—None. *Class II.*—Hamilton.

GENERAL CHEMISTRY.

FIRST YEAR.—*Class I.*—Weir (*Burland Prize*), Evans, Ferrier. *Class II.*—Watson, Dawson. *Class III.*—Brown, Perkins; Shearer and Taylor, equal.

THEORETICAL CHEMISTRY.

THIRD YEAR.—*Class I.*—None. *Class II.*—Hamilton.

GEOLOGY (*Advanced*).

FOURTH YEAR.— *Class I.*—Howard.

GEOLOGY (*Ordinary*).

THIRD YEAR.—*Class I.*—Ogilvie (*Prize*), Smith. *Class II.*—McDonald and Robert, equal; Davis. *Class III.*—McKenzie, Walters, Hislop.

MINERALOGY AND BLOWPIPE ANALYSIS.

THIRD YEAR.—*Class I.*—None. *Class II.*—Robert, Hamilton, Murray (occ).

ZOOLOGY AND PALÆONTOLOGY.

SECOND YEAR.—*Class I.*—Mathewson (*Prize*). *Class II.*—Fortier, Macy, Thompson. *Class III.*—Mignault, Hamilton, Routhier, Roy, Pitcher, Lesage.

ESSAYS.

FOURTH YEAR.—(THE INDICATOR AND INDICATOR DIAGRAMS).—*Class I.*—Dowling; McEvoy and Smith (R. F.), equal.

THE ASCENT AND DESCENT OF MINES.—*Class I.*—Howard.

THIRD YEAR.—(EARTHWORK AND RETAINING WALLS.)—*Class I.*—Smith (C. B.); McDonald and Ogilvy, equal; Davis and McKenzie, equal. *Class II.*—Walters, Hislop.

(THE TEETH OF WHEELS).—*Class I.*—McTaggart. *Class II.*—Graham.

(THE ASCENT AND DESCENT OF MINES).—*Class I.*—Robert. *Class II.*—Murray (occ.)

(THE MANUFACTURE OF THE CARBONATE OF SODA).—*Class I.*—None. *Class II.*—Hamilton.

SECOND YEAR.—(THE PRATT-TRUSS BRIDGE).—*Class I.*—Thompson, Fortier, Pitcher. *Class II.*—McCarthy. *Class III.*—Routhier, Lesage, Roy.

(THE TEETH OF WHEELS).—*Class I.*—None. *Class II.*—Burns. *Class III.*—Dagron and Reid, equal.

(SALT: ITS OCCURRENCE IN NATURE AND THE METHODS OF OBTAINING IT).—*Class I.*—Trenholme, Macy, Mathewson. *Class II.*—Mignault.

EXPERIMENTAL PHYSICS.

THIRD YEAR.—*Class I.*—Smith (C. B.) (*Prize*), Ogilvy. *Class II.*—Hamilton and McDonald, equal; Graham, Hislop. *Class III.*—Robert, McKenzie, Walters.

SECOND YEAR.—*Class I.*—Mathewson (*Prize*), Macy, Thompson. *Class II.*—Lesage. *Class III.*—Routhier, Fortier; Pitcher and Roy, equal; Reid.

MATHEMATICS.

FOURTH YEAR.—*Class I.*—Dowling. *Class II.*—McEvoy, Howard, Smith (R. F.).

THIRD YEAR.—(*Advanced*).—*Class I.*—Ogilvy and Smith (C. B.), equal. *Class II.*—None. *Class III.*—McDonald.

THIRD YEAR.—(*Ordinary*).—*Class I.*—Smith (C. B.), Ogilvy (*Prize*). *Class II.*—McKenzie, McDonald. *Class III.*—Davis and Hislop, equal; Walters.

SECOND YEAR.—*Class I.*—Thompson (*Prize*); Macy and Trenholme, equal (*Prize*). *Class II.*—Fortier, Mathewson. *Class III.*—Pitcher, MCarthy, Mignault.

FIRST YEAR.—*Class I.*—Evans (*Prize*), Watson. *Class II.*—Dawson, Brown. *Class III.*—Ferrier, Weir, Perkins, Taylor.

MATHEMATICAL PHYSICS.

THIRD YEAR.—*Class I.*—Ogilvy, Smith (C. B.). *Class II.*—McDonald. *Class III.*—Graham; Robert and McTaggart, equal; Hislop, McKenzie, Walters.

SECOND YEAR.—*Class I.*—Thompson, Trenholme. *Class II.*—Fortier, Macy. *Class III.*—None.

ENGLISH LANGUAGE AND LITERATURE.

FIRST YEAR.—*Class I.*—Ferrier, Evans. *Class II.*—Weir, Brown. *Class III.*—Dawson, Watson; Perkins and May, equal; Taylor.

ENGLISH COMPOSITION.

SECOND YEAR.—*Class I.* Fortier, Macy, Mathewson. *Class II.*—Mignault; Thompson and Dagron, equal; McCarthy, Reid, Burns. *Class III.*—Pitcher and Roy, equal; Routhier.

GERMAN.

FOURTH YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—McEvoy.
THIRD YEAR.—*Class I.*—None. *Class II.*—McKenzie. *Class III.*—Davis, McDonald, Hamilton.
FIRST YEAR.—*Class I.*—May, Weir. *Class II.*—None. *Class III.*—Perkins

FRENCH.

SECOND YEAR.—*Class I.*—Fortier (*Prize*). *Class II.*—Thompson, Mathewson; Dagron and Macy, equal. *Class III.*—Reid, McCarthy, Pitcher.
FIRST YEAR.—*Class I.*—Evans (*Prize*), Ferrier. *Class II.*—Browl· Dawson. *Class III.*—Taylor, Watson, Costigan.

DR. WICKSTEED'S MEDALS FOR PHYSICAL CULTURE.

(*The gift of Richard M. Wicksteed, LL.D*).

Gold Medal.—BLAND, CHARLES, B.A.

Honorable Mention.—RICHARDSON, A. W., B.A.

Silver Medal.—MCLEAN, JOHN A.

Bronze Medal.—LOCHEAD, WM.

Graduates of the University.

DOCTORS OF DIVINITY.

*Bethune, Rev. John [ad eundem]. 1843 *Falloon, Rev. Daniel [Hon].....1844

DOCTORS OF LAWS AND OF CIVIL LAW.

*Abbott, Christopher, B.C.L. [D.C.L. in course].....1862
Abbott, Hon. J. J. C., B.C.L. [D.C.L. in course] 1867
*Adamson, Rev. Wm. A. [D.C.L. hon].....1850
Badgley, Hon. Wm. [D.C.L. hon]...1843
*Bancroft, Rev. C., D.D. [LL.D. hon].....1870
Blackwood, Right Hon. Frederick Temple Hamilton, Earl of Dufferin [LL.D. hon].....1878
Bond, Rev. Wm., M.A. [LL.D. hon].1870
Butler, Thomas P., B.C.L. [D.C.L. in course].....1881
Campbell, Right Hon. Sir John Douglas Sutherland, Marquis of Lorne, [LL.D. hon].....1883
*Campbell, George W., M.A., M.D. [LL.D. hon].....1875
Chamberlin, B., M.A., B.C.L. [D.C.L. in course].....1867
Chauveau, Hon. Pierre J. O. [LL.D. hon].....1857
Cordner, Rev. John [LL.D. hon]....1870
Cornish, Rev. George, M.A. [LL.D. in course].....1872
*Cushing, Lemuel, M.A. [LL.D. in course].....1879
Davidson, Charles Peers, M.A., B.C.L. [D.C.L. in course].....1875
*Davies, Rev. Benjamin, Ph.D. [LL.D. hon].....1856
Dawson, John William, M.A. [LL.D hon].....1857
*DeSola, Rev. A. [LL.D. hon]... 1858
Douglass, Rev. Geo. [LL.D. hon]....1870
*Doutre, Gonzalve, B.C.L. [D.C.L. in course].....1873
Duff, Rev. Archibald, M.A. [LL.D. in course].....1881
*Falloon, Rev. D., D.D. [LL.D. hon].....1862
Frechette, Louis H. [LL.D. hon].....1881
Gautier Zephirin, B.C.L. [D.C.L. in course].....1883
Gilman, Francis E., M.A., B.C.L. [LL.D. in course].....1877
Girouard, Désiré, B.C.L. [D.C.L. in course].....1874
*Head, Right Hon. Sir Edmund W., Baronet, M.A. [LL.D. hon]...1862
Hemming, Edward J, B.C.L. [D.C.L. in course].....1871
*Holmes, Andrew F., M.D. [LL.D. hon] 1858
Howe, Henry Aspinwall, M.A. [LL.D. hon] 1870
Hunt, T. Sterry, M.A. [LL.D. hon]...1865
Jenkins, Rev. John (D.D. Univ. N.Y.) [LL.D. hon].....1879
Kerr, William H. [D.C.L. in course] 1873
Kirby, James, M.A., B.C.L. [D.C.L. in course] [LL.D. in course].....1874
Laflamme, Hon. R. G., B.C.L. [D.C.L. in course]..... 1873
Lawson, G, Ph.D. [LL.D. hon]..... 1862
*Lafrenaye, P. R., B.C.L [D.C.L. in course] 1873
Leach, Rev. Wm. T., M.A. [D.C.L. hon] 1849
[LL.D. hon]..... 1857
*Logan, Sir William E., Kt. [LL.D. hon].....1856
*Lundy, Rev. Francis [D.C.L. hon]..... 1843
Lyall, Rev. W. [LL.D. hon] 1864
McGregor James, M.A. [LL.D. in course].....1880
MacVicar, Rev. D. H. [LL.D. hon]...1870
Meredith, Edmund A., B.C.L. [LL.D. hon]..... 1857
Miles, Hy. H., M.A. [LL.D. hon].....1866
Morris, Hon. Alexander, M.A., B.C.L. [D.C.L. in course].....1862
Morrison Rev. Jas. D., M.A. [D.D. Union College N.Y.] [LL.D. in course].....1880
Parkman, Francis [M.A. Harvard] [LL.D. hon.].....1879
Robins, Sampson Paul, M.A. [LL.D. in course].....1880
Rollitt, Albert K. [LL.D. London Uni.,] [LL.D. ad eun. 1871
Roy, Rev. James, M.A. [ad eun] [LL.D. in course].....1883
Selwyn Alfred R. C., F.R.S. [LL.D. hon].....1881
*Smallwood, Charles, M.D. [LL.D. hon]..... 1856
*Smith, William Stuart [LL.D. hon].1858
*Vallieres de St. Real, Hon. J. R. [D.C.L. hon]..... 1844
Wickes, Rev. Henry [LL.D. hon]....1868
Wicksteed, Richard M., M.A. [LL.D. in course]..... 1879
Wilkes, Rev. Henry, M.A., D.D. [LL.D. hon].....1870
Wurtele, Hon. J. S. C., B.C.L. [D.C.L. in course].....1882

*Deceased.

DOCTORS OF MEDICINE.

* Adsetts, John, 1866
Alexander, Robert A., Grimsby, O 1871
Alguire, Duncan O., Cornwall, O 1873
Allard, Emery, Belœil, Q 1866
† Allan, Hamilton, Oconto, Wis 1872
Allen, C. E., East Farnham, Q 1883
Alloway, Thomas Johnson, Montreal 1869
Anderson, Alex., Med. Dept. Indian Army 1866
*Anderson, John C., 1865
Archer, Ths., Wandsworth, Eng 1869
Ardagh, Johnson, Orillia, O 1869
Armstrong, Geo. E., Montreal 1877
*Arnoldi, Daniel [Hon], 1847
Atkinson, Robert, 1862
Ault, Alexander, Ochkosh, Wis 1860
Ault, Charles, Montreal 1855
*Ault, James F., 1855
Ault, Edwin D., Aultsville, O 1868
Austin, Fred. John, Sherbrooke, Q 1862
Ayer, N., M.A., Sackville, N.B 1880
Aylen, John, Aylmer, Q 1857
Aylen, James, Aylmer, Q 1863
Backhouse, J. B., Braidwood, Ill 1870
Bain, D. S. E., Staff Surgeon Maj. 1868
Bain, Hugh U., Rat Portage, Man 1875
Baird, James G., Pakenham, O 1870
Baker, Albert, Dawlish-Devon, 1848
Barclay, George, Parkhill, O 1870
*Barnston, James [ad eun], 1856
Battersby, Charles, Port Dover, O 1861
Baynes, Donald, M.A., London, Eng 1876
Baynes, Geo. Aylmer, Winnipeg, Man 1869
Beatty, D., Richmond, Carlt. Co., O 1862
*Beaudet, Alfred. 1865
Beaudry, Louis B., St. Cesaire, Q 1871
Beckstead, M., Lisbon, St Law Co. N Y 1878
†Bell, James Montreal 1877
*Bell, John, M.A., 1866
Bell, Robert, C.E., Ottawa 1878
Bell, Robert W., Peterboro, O 1873
Belleau, Alfred, Quebec 1862
*Bergeron, Joseph, 1870
Bergin, Darby, Cornwall, O 1847
Bessey, William E., Montreal 1863
Bender, Prosper, Boston, Mass 1865
Benson, Joseph B., Chatham, N B 1875
*Bibaud, Jean G., 1843
Blackader, Alex. D., B.A., Montreal 1871
Blacklock, John J., Chesterville, O 1851
*Blanchet, J. B., 1863
Blair, Robt. C., Three Rivers, Q 1865
*Bligh, John W., 1865
Bogart, Irvine D., Mene, O 1859
*Bomberry, Geo. E., 1875
Bonesteel, S. A., Colombus, Neb 1881
Boulter, George H., Stirling, O 1852
Bowser, J. C., Kingston, N B 1883
*Boyer, Louis, 1842
*Boylan, Andrew A., 1857
Boyle, Albert D., Carbonear, Nfld 1877
*Bowman, William E., 1860
Bower, Silas J., Waddington, N Y 1865
*Bradley, William, 1869
*Braithwaite, Francis H., 1863
Brandon, John, Ancaster, O 1867
Breslin, William I., 46th Regiment 1847
Brigham, Josiah S., Philipsburg, Q 1848
Brissette, Henry R., Lowell, Mass 1871
Bristol, Amos S., Napanee, O 1850
Brodeur, Alphonse, 1863
Brodie, John, Honolulu, Sdwh Isl 1877
Brooks, Samuel T., St Johnsbury, Vt 1851
*Brouse, William H., 1847
Brouse, Jacob E., Brockville, O 1861
Brossard, J. B. J., Laprairie, Q 1875
Brown, Thos. L., Melbourne, Q 1881
Brown, J. L., Plattsville, O 1879
Brown, Peter E., Ste Anne de Bellevue, Q. 1863
Brown, Harry, 405 W. Washington St, Chicago 1873
Brown, Chs. O., Barnston, Q 1882
Browne, Arthur A., B.A., Montreal 1872
Bruneau, Adolphe, Sorel, Q 1853
*Bruneau, Olivier T. [Hon], 1843
*Bruneau, Onésime, 1851
Bryson, William G., Fenelon Falls, O 1867
Bucke, Richard Maurice, London, O 1862
*Bucke, Edward H., 1852
*Buckle, John M. C., 1869
Buckley, William P., Prescott, O 1870
Bull, George J., Colorado Springs, Col 1869
*Bullen, Charles F., 1864
Buller, Frank, Montreal 1879
Burgess, J. A., Listowell, O 1868
Burch, B. F., Walla Walla, Walsh Ter 1866
*Burland, John H., 1863
Burland, Samuel C., Chester, Penn 1877
Burland, William B., Montreal 1872
Burland, William H., Montreal 1875
Burland, Benj. W., Mineville, N Y 1882
Burrows, Philip P., Lindsay, O 1866
*Burnham, Robert Wilkins, 1860
*Burns, Alfred J., 1854
Burritt, Horatio C., Toronto, O 1863
Burwash, Henry J., Minneapolis, Minn 1879
*Butler, George C., 1865
Butler, Billa F. Stirling, O 1879
*Buxton, John N., 1849
Cahalan, James, Wyandotte, Mich 1880
†Cameron, Chas. E., Montreal 1883
Cameron, Paul, Alexandria, O 1881
Cameron, Duncan H, Emerson, Man 1877
Cameron, James C., Montreal 1874
Cameron, John D., Norway, Mich 1878
*Campbell, Donald Peter, 1862
Campbell, Francis Wayland, Montreal 1860
*Campbell, G. W., M.A. [ad eun], 1843
Campbell, J., New Zealand 1876
*Campbell, Samuel, 1866
Campbell, John, Seaforth, O 1869
Campbell, Lorne, London, Eng 1882
Cannon, Gilbert, Almonte, O 1877
Carmichael, D. A., Mar. Hosp. Serv, Pittsburg, Pa 1873
Carey, Augur D. L. [ad eun], 1864
Carman, Philip E., Detroit, Minn 1879
Carman, John B., Detroit, Minn 1879
Cassidy, David M., Med. Supt. County Asylum, Lancaster, Eng 1867
Cassady, John F., Goderich, O 1865
*Carroll, Robert W. W., 1859
Carruthers, Geo., North Bedeque, PEI 1883
Carson, J. H., Lake Park, Minn 1881
*Carson, Augustus, 1843
Carter, Samuel A., Meadow Vale, O 1859
Case, W. Hermanus, Hamilton, O 1879
Casgrain, Charles E., Windsor, O 1851
Cattanach, Andrew J., Denver, Col 1871

Cattanach, Angus M., Dalhousie Mills, O 1882
Chagnon, Vincelaus G. B., Fall River, Mass 1861
*Chaliner, Francis, 1849
Cherry, William, Toledo, Ohio 1869
*Chesley, George Ashbold, 1862
Chevalier, Gustave, Bedford, Q 1860
Chevalier, Napoleon E., Lewiston, Me 1873
Chipman, C. J. H., B.A., Prescott, O 1868
*Chisholm, Alex., Alexandria, O 1878
Chisholm, Murdoch, Bay Roberts, Nfld 1879
Christie, George H., Lachute, Q 1872
Christie, John B., Pelaluma, Son Co., Cal 1865
Christie, Thomas, Lachute, Q 1848
Christie, John H., B.A., 833 W 22nd St, Chicago 1875
Christie, Edmund, Chicago 1882
*Church, Charles H., 1862
Church, Clarence R., Ottawa 1868
Church, Coller M., Aylmer, Q 1855
Church, F. W., Aylmer, Q 1880
Church, Levi R., Montreal 1857
Church, Mills K., Pierrepont Manor, N Y 1864
*Church, Peter H., 1846
Clarke, Octavius H. E., St. Louis, Mo 1870
Clarke, Wallace, B.A., Utica, N Y 1871
Clark, Richard A., Oakville, O 1870
Clark, F. G. B., Fordwych Rd. Kilburn Lond., Eng 1876
Clemesha, John W., Port Hope, O 1867
Clement, Victor A., St. Guillaume, Q 1866
*†Cline, John D., B.A., 1874
Cluness, Daniel, Nanaimo, B C 1870
Codd, Alfred, Winnipeg, Man 1865
*Collins, Charles W., 1869
Collison, R., Norfolk, St Law Co., N Y 1878
Colquhoun, George, Iroquois, O 1876
Comeau, John B., St David, Q 1870
Cook, Guy R., B.A., Louisville, N Y 1876
Cook, Hermon L., Napanee, O 1854
Cooke, Charles H., Toronto, O 1866
Cooke, Sidney P., Hull, Q 1869
Cooke, W. H., Wolfston, Q 1876
Copeland, William L., Chicago 1872
*Corbett, A. P. M., 1854
Corbett, William H., Brig. Surg. Army Med Dept. 1854
Corlis, Josiah, St Thomas, O 1869
Cormack, Wm., Morristown, O 1881
*Corsan, John, 1869
Cotton, C. L., Cowansville, Q 1877
Cousins, W. C., Ottawa, O 1882
*Cowley, Thomas McJ., 1870
Cowley, D. K., Granby, Q 1880
Cox, Frank, Charlottetown, P E I 1869
Coyle, Henry W., Sorel, Q 1876
Craig, Thornton, Capay, Cal 1876
Craik, Robert, Montreal 1854
Cram, Daniel C., Lawrence, Kan 1872
*Crawford, James [ad eun], 1854
Crichten, Stuart, Sonora, Cal 1865
Crothers, William, Stanbridge, Q 1876
*Culvers, Joseph B., 1848
*Cunynghame, W. C. Thurlow, 1858
Cutter, Frederick A., Sutton, Q 1873
Daly, Guy D. F., 1868
*Dansereau, Charles, 1842
Dansereau, Charles, 1869
*Dansereau, Pierre, 1835
D'Avignon, F. F., Leadville, Col 1871
Dawson, R., B.A., Winnipeg, Man 1882
Dearden, G. A., St. Paul, Neb 1882
*Dease, Peter Warren, 1847
DeBonald, C. S., Berthier en haut, Q 1862
DeBoucherville, Charles B., Quebec 1843
DeGrosbois, T. B., Roxton Falls, Q 1868
Demorest, B. G. G., Stirling, O 1852
Derby, W. J., Rockland, O 1882
*Desaulniers, Antoine A., 1863
*DeCelles, Charles D., 1841
Dibblee, G. O., Moore's Mills, N B 1880
*Dice, George, 1864
*Dick, James R., 1842
Dickinson, James S., Cornwall, O 1846
*Dickinson, George, 1868
Dickson, William W., Pembroke, O 1863
Digby, F. Winniett, Brantford, O 1863
*Dodd, John, 1864
Donnelly, C. H., Waresville, Texas 1860
*Dorion, Severe, 1843
*Dorland Enoch G., 1850
Dorland, James, Milwaukee, Wis 1875
Dougan, William, St. Catharines, O 1867
Douglass, James [Hon] 1847
Dowling, John F., Egansville, O 1875
Drake, Joseph M., Montreal 1861
Dubuc, Charlemagne, Montreal 1864
*Duckett, Stephen, 1853
Duckett, William A., Montreal 1859
Dufort, Thadee A., St Sebastian, Q 1865
Duhamel, Louis, Hull, Q 1860
Duncan, George, Fareham, Hants, Eng 1866
Duncan, Gideon M., Bathurst, N B 1871
Duncan, George C., London, Eng 1875
Duncan, James S., Surg. Mag. Army 1858
*Duncan, John, 1871
Duncan, W. T., Fergus Falls, Minn 1882
Dunlop, H. A., Crookston, Minn 1882
*Dunn, William Oscar, 1843
Dunsmore, John M., Mitchell, O 1870
Dupuis, Joseph B., Clarenceville, Q 1856
Easton, John, Brockville, O 1852
Eberle, Harry A., Kansas City, Mo 1876
Edwards, Eliphalet G., London, O 1855
Edwards, J. S., London, O 1880
Edwards, Oliver C., Qu'Appelle, N.W.T. 1873
Elkinton, A. G., Surg. Maj. Gren. Guards 1862
Ellison, S. R., 268 W 43rd St., N Y 1873
Emery, Gordon J., Minneapolis, Minn 1857
*English, T. F., 1858
*Erskine, John, 1860
Ethier, Calixte, St Eugene, Q 1867
Evans, Griffith, Vet Dept, Army, Woolwich, Eng 1864
Ewing, William, Hawkesbury, O 1873
Falkner, Alexander, Lancaster, O 1866
Falls, Samuel K., Wakefield, Q 1875
Farewell, G. McGill, Princeton, O 1872
Farewell, W. G., Oshawa, O 1868
Farley, James T., Fremont Centre Mich 1877
Farley, John J., Belleville, O 1873
Faulkner, George W., Stirling, O 1871
Faulkner, D. W., Foxboro, O 1878
Feader, H. C., Chicago, Ill 1881
Fenwick, George E., Montreal 1847
Fergusson, A. A., Franklin Centre, Q 1864
Fergusson, Alex. R., Dalhousie Mills, O 1866
Fielde, E. C., Prescott, O 1881
*Finlayson, John, 1834
Finnie, John T., Montreal, Q 1866
*Fisher, John, 1847

*Fitzgerald, James, 1865
Fortier, Louis A., St David, Q 1878
Fortin, Pierre, Montreal 1845
Fortune, Lewis M., Huntingdon, Q 1873
Foster, Stephen Sewell, 1846
Fraleigh, William S., Gananoque, O 1869
Fraser, H. D., Perth, O 1881
Fraser, Alex. C., Manitowoc, Wis 1877
*Fraser, William, 1836
Fraser, William H., 1867
Fraser Donald M., Stratford O 1869
Fraser, Donald, Chicago, Ill 1868
Fraser, J. R., Medcalfe, O 1878
Freeman, C. M., Cape Sable Isl., N S 1871
Fuller, W., Grand Rapids, Mich 1866
Fuller, H. LeRoy, B.A., Sweetsburg, Q 1870
Fulton, James H., Montreal 1863
Gale, Hugh, Bad Axe, Mich 1882
*Garvey, Joseph, 1852
Gardner, H. H., San Francisco, Cal 1878
Gardner, John J., Montreal, Q 1883
Gardner, Matthew, Sacramento, Cal 1871
Gardner, William, Montreal 1867
*Gascoigne, Geo. E., 1861
Gaviller, Edwin A., Hamilton, O 1873
*Gauvreau, Elzear, 1855
*Gauvreau, Lewis H., 1836
Gendron, Thomas, St. Raymond, Q 1866
Gernon, George W., Marieville, Q 1872
*Gibb, George D., 1846
Gibson, John B., Cowansville, Q 1855
Gibson, W. B., Dunham, Q 1878
*Gibson, Edward B., 1864
Gilbert, Henry L., Sherbrooke, Q 1875
Gillis, John, A.F., Summerside, P E I 1877
Gillies, John, Teeswater, O 1867
Gilmour, Angus A., Modesta, Cal 1868
*Giroux, Philippe, 1859
Girdwood, Gilbert P., Montreal 1869
Glen, C. W. E., Chambly, Q 1858
Godfrey, Robert, Montreal 1844
Godfrey, Abraham C., Freemantle, Southampton, Eng 1865
*Goodhue, P. J., 1875
Goforth, Franklin, Runcorn, Ches. Eng 1863
Gordon, C. M., Minneapolis Min 1881
Gordon, Robert, Arlington, Ill 1868
*Gordon W. W., 1863
Graham, Charles E., Hull, Q 1865
*Graham Henry, 1863
Graham, Kenneth D., Ottawa, O 1875
Grant, Donald J., Woodbridge, O 1863
Grant, James A., Ottawa 1851
Grant, Jas. A., B.A., Ottawa, O 1882
Grant, William, Perth, O 1867
Gray, John S., Winnipeg, Man 1876
Gray, Thomas, Brigus, Nfld 1879
Gray, James, Montreal, O 1883
Gray, W. L., Pembroke, O 1881
Greaves, Henry C., Barbadoes 1877
Greenwood, F. S., St. Catharines, O 1878
Greer, T. A., C. SS. Minia, Halifax, N S 1876
Grenier, L. P. A. Lotbiniere, Q 1863
Groves, George H., Carp, O 1879
Guerin, James J. E., Montreal, 1878
Guest Thomas F., St. Mary's, O 1873
Gunn, James, Durham, Co., Grey, O 1861
Gurd, David F., Montreal 1879
Gustin, William Claud, Detroit, Mich 1863
Hagarty Dan. M. J., Portage la Prairie, Manitoba 1866
*Hall, Archibald, [ad eun] 1848
*Hall James B., 1866
*Hall, J.W., 1846
Halliday, James T., Peterboro, O 1865
*Hamilton, Andrew W., 1859
Hamilton, Charles S., Demorestville, O 1868
Hamilton, John R., Stratford, O 1871
*Hamilton, Rufus F., 1861
Hamel, Joseph A., Murray Bay, Q 1856
Hammond, J. H., Montreal 1869
Hanna, Franklin, Lansdowne, O 1879
Hanover, William, Seaforth, O 1875
Hanvey, C. J. B., Yale, B C 1883
Hart, F. W., St. Martinville, La 1835
Harvie, J. B., Troy N Y 1881
Harvey, Wm. A., Harriston, O 1874
*Harding, F W., 1868
Harkin, Henry, Montreal, O 1867
*Harkin, William, Vankleek Hill, O 1858
Harkness, John, Dickson's Corners, O 1862
Harkness, Andrew, New Lancaster, O 1869
Harrison, David H., Ste Mary's, O 1864
Harrisson, H. J., Moulinette, O 1883
Hart, George C., Prescott, O 1879
Hannington, E. B. C., Yale, B C 1875
Hayes, James, Simcoe, O 1866
Heard, C. De W., Charlottetown, P E I 1880
Hebert, P. Zotique Whitehall, N Y 1873
†Henderson Alex. A., Ottawa, O 1 70
Henderson, E. G, 1874
*Henderson, Peter, A.M., 1848
Henderson, Andrew, Calgary, N.W. 1880
*Henry, Walter, [Hon.] 1853
*Henry, Walter J., 1856
Henry, Wm. G., Montreal, Q, 1883
Henwood, Alfred J., Brantford, O 1879
*Hervey, Jonas J., 1866
Hethrington, Harry, Hatley, Q 1872
Heyd, H. E., Buffalo, N Y 1881
Hickey Charles E, Morrisburg, O 1866
Hickey, Samuel A., B.A., Aultsville, O 1874
Higginson, H. A., Portage la Prairie, Man 1881
Hils, Joseph, Woonsocket, R I 1878
Hingston, W. H., Montreal 1851
Hockridge, Thos. G., London, Eng 1874
*Holden, Rufus, 1844
Holwell, John, Kingston, Jamaica 1868
*Holmes, Andrew F., [ad eun] 1843
Hopkins, Alf. J., Cookshire, Q 1883
Houston, D. W., Cohoes, N Y 1881
Howard, James, Lachine, Q 1867
Howard, Robert, St. John's, Q 1872
Howard, R. Palmer, Montreal, Q 1848
†Howard, R. J. B., B.A., Montreal, Q 1882
Howden, Robert T., Winnipeg, Man 1857
Howey, W. H., C. P. R. Matawan, O 1878
Howitt, Wm. H., Toronto, O 1870
Howland, Francis L., Huntsville, O 1867
Hulbert, E. Augustus, Brooklyn, N Y 1860
Hume, William L., Leeds, Q 1875
*Hunt, J. J., 1881
Hunt, Henry, Williamstown, O 1876
Hunt, J. H., Surg. Maj. Army. Med Dept. 1869
Hunt, Lewis G., B.A., Sheffield, Eng 1871
†Hurd, Ed. P., Newburyport, Mass 1865
Hurdman, Benj. F. W., Aylmer, Q 1882
Hurlbert, George W., Thornbury, O 1859
Hurlbert, Richard W., Brucefield, O 1873
Hutchinson, John A., Bluevale, O 1878
Imrie, A. W., Detroit Mich 1879
Inksetter, D. G., Dundas, O 1880

Irvine, James C., Liverpool, Eng 1866
Irwin, J. L., Chicago 1879
Ives, Eli, Coaticook, Q 1863
*Jackson, A. T., 1846
Jackson, Wm. Fred., Brockville, O 1873
Jackson, Joseph A., Manchester, N H 1879
Jamieson, Alex., B.A., Kansas City, Mo 1877
Jamieson, Thos. A., Fort Covington N Y 1875
Jamieson, Chas. J., Winnipeg, Man 1879
Johnson, James B., London, Eng 1876
Johnson, J. C., Surg. Maj. Army 1867
Johnson, J. R., Farmersville O 1883
Johnston, Thomas G., Sarnia, O 1871
Jones, Charles R., Hatley, Q 1874
Jones, George N., Burlington, Iowa 1874
*Jones, Thomas W., [ad eun] 1854
*Jones, Jonathan C., 1865
Jones, Wm Justus, Prescott, O 1856
Jones, H. J. M., Wabash Av. Chicago 1873
Josephs, G. E., Pembroke, O 1881
Kearney, Wm. J., 1875
Keefer, Wm. N., B.A., Surg. Maj., Bengal Army 1869
*Keeler, Thomas, 1859
†Kelly, Clinton Wayne, Louisville, Ky 1867
*Kelly, Wm., 1846
†Kelly, Thomas, Haslington, Demarara 1873
Kempt, William, Lindsay, O 1864
Kennedy, Richard A., Montreal 1864
*Kerr, James, 1858
Killery, St. John, Surg. Maj. Army 1862
King, Wm. M. H., St. Sylvestre, Q 1859
King, Reginald, A. D., Compton, Q 1868
King, Richard, Peterboro, O 1867
*Kirkpatrick, A., 1856
Kittson, John G., St. Paul, Minn 1869
Kittson, Edmund G., Winnipeg, Man 1873
Klock, Robert H., Aylmer, Q 1882
*Knowles, James A., 1866
*Kollmyer, Alex. H., 1856
Laberge, Ed., St. Philomene Q 1856
Lane, John A., 1877
Lang, Christopher L., Owen Sound, O 1876
Lang, W. A., St. Mary's, O 1881
*Lang, Thos. D., 1866
Langlois, O. X., Gordon, O 1875
*Langrell, Richard T., 1865
Larocque, A. B., Montreal, Q 1847
Lathern, J. S., Yarmouth, N S 1883
Laurin, Edgar J., Deer Lodge, Mon 1881
Law, D. W. C., Bond Head, O 1863
Law, William K., Coleraine, Irel 1877
†Lawford, John B., London, Eng 1879
*Lawrence, Henry J. H., 1862
Leavitt, Julius, Melbourne, Q 1866
Leclere, George, Montreal 1851
Leclair, Napoleon, Lancaster, O 1861
Lee, James C., 1858
*Lee John Rolph 1849
Lefebvre, John M., Brockville. O 1879
Legault. D., Salaberry de Valleyfield, Q 1866
Lemoine, C., St. Pierre, Ile d'Orleans 1850
Lapailleur, Leonard, St. Martin, Q 1848
Leprohon, John L., Montreal 1843
Levi, Reuben Inverness, Q 1876
Lindsay, Heriot, St. John's, Q 1861
*Lister James, 1862
*Lloyd, H. W., 1879
*Locke, C. F. A., 1872
*Logan, David D., 1842
Logan, Robert, Iona, Mich 1880
*Logie, William, 1833
*Long, Alexander 1844

Longley, Edmund, 1866
Longpre, Pierre F., Quebec, Q 1848
Loring, J. Brown, Sherbrooke, Q 1883
*Loupret, Andre, 1850
Loux, William, Russell, O 1870
Loverin, Nelson, Montreal, 1855
Lovett, William, Ayr, O 1876
†*Lucas, T. D'arcy 1869
Lunam, H., B.A., Campbellton, N.B. 1881
Lundy, E. L., Surg. Maj. Army 1862
Lyford, Chs. C., Minneapolis, Minn 1879
Lyon, Arthur, Shawville, Q 1861
Maas, Rudolph J., Chicago, Ill 1880
*MacDiarmid John D., 1847
MacDonald, Angus, St. Paul, Minn 1863
*Macdonald, Colin, 1853
Macdonald, R. T. E., Sutton, Q 1881
Macdonald, Roderick A., Rockwood, Man 1874
MacDonell, Æneas, Ottawa, O 1849
MacDonnell, R, L., B.A., Montreal, Q 1876
MacFarlane, William, Almonte, O 1869
Macfie, James, Fort Covington, N Y 1869
MacIntosh, Robert, Rapid City, NWT 1863
Mack, Francis Lewis, Amhersiburg, O 1862
*Mackie, J. R., 1865
*Macklem, Samuel S 1859
MacLean, Archibald, Sarnia, O 1867
*Macnabb, Francis A. L., 1870
Macneil, Alex., Charlottetown, P E I 1883
McArthur, Robert D., Chicago, Ill 1867
McArthur, John A., Port Elgin, O 1879
McBain, John, Martintown, O 1874
McCallum, Duncan C., Montreal, Q 1850
McCann, J. J., B.A., Hopkinton, Mass 1878
McCarthy, W., Chicago, Ill 1867
*McConkey, T. C., 1872
McConnell, John B., Montreal, Q 1873
*McCord, John D., 1864
McCorkill, R. K. C., East Farnham, Q 1882
McCormick, Andrew G., Richmond, Q 1874
McCrimmon, Donald A., Lucknow, O 1869
McCrimmon, John, Kincardine, O 1878
McCrimmon, Milton, Palermo, O 1878
McCullough, George, St. Mary's, O 1879
*McCullough, Michael, [Hon] 1843
McCully, Oscar J. M. A., Baie Verte, N.B. 1879
McCurdy, John, Chatham, N B 1866
McDermid, Wm., Dunvegan, O 1875
McDiarmid, Donald, Athol, O 1867
McDiarmid, James, Hensall, O 1873
McDonald, Alex., Paisley, O 1883
†McDonald, John A., Montreal 1880
McDonald, Jos. D. A., 1873
McDonald, R. C., Owatonna, Minn 1880
McDonald, Roderick, Cornwall, O 1834
McDonald, Alex. R., Trinity, Texas 1882
McDonnell, Alex. R., Alexandria, O 1874
McDonell, Angus C., Montreal, Q 1852
McDougall, Peter A., Ottawa, O., 1864
*McDougall, Peter A., 1847
McEachran, W., Winnipeg, Man 1880
McEwan, Findlay, Carlton Place, O 1870
McGannon, E. A., Lowell, Mass 1881
McGarry, James, Drummondville, O 1858
McGeachy, William, Iona, O 1867
McGill, William, Oshawa, O 1849
*McGillivray, Donald, 1861
McGowan, Henry W., Beebe Plain, Q 1867
McGrath, Thomas, 1849
*McGregor, Duncan, 1861

McGuigan, W. J., London, O 1879
*McGuire, Bernard D., 1873
McIlmoyl, Henry A., Clayton, N Y 1876
McInnes, Walter J., Victoria, O 1868
McIntosh, James, Vankleek Hill, O 1858
McIntosh, Donald J., Vankleek Hill, O 1870
McIntyre, Peter A., Souris, P E I 1867
McKelcan, George Lloyd, Hamilton, O 1860
McKenzie, B. E., B.A., Riverside, Toronto 1880
McKenzie, K. A. J., Portland, Oregon 1881
McKay, John, Woodville, O 1869
McKay, Walter, Courtland, O 1854
McKinley, John K., Bristol, Q 1878
McLaren, Peter, Brudenell, P E I 1869
McLaren, Peter, Paisley, O 1861
McLaren, Peter, Ormstown, Q 1872
McLaren, D. C., B.A., Montreal, Q 1880
*McLean, Alexander, 1860
McLean, J. W., Strathlorne N S 1885
McLean, Thos. N., Fergus Falls, Minn 1882
McLeod, Arch. B.A., Orwell, P E I 1885
McLeod James, Charlottetown, P E I 1873
McMicking, George, Goderich, O 1851
McMillan, Æneas J., Manitou, Col 1874
McMillan, Louis, J. A., Mansonville, Q 1860
McMillan, John, Pictou, N S 1857
McMurray, Samuel, 1841
*McNaughton, E. P., 1834
McNee, Stewart, Rosemount, Ont 1879
McNeece, James, 1869
McNeil, Ernest, Vermont River, P E I 1878
McNulty, M., Brashers Falls, N Y 1880
McQuillen, James, Marquette, Mich 1874
*McRae, George, 1876
McTaggart, Alexander, London, O 1869
*McVean, John M., 1868
Madill, John, Alliston, O 1867
Maher, J. J. E., New York, 1883
Major, George W., B. A., Montreal, Q 1871
Malcolm, John Rolph, Scotland, O 1861
*Malhiot, Alfred, 1846
Malloch, Edward C., Ottawa, O 1863
*Malloch, William B., 1867
Mallory, Albert E, Warkworth, O 1872
Marceau, Louis T., Napierville, Q 1872
Markell, Richard S., Cloverdale, Cal 1867
*Marr, Israel P., 1849
Marr, Walter H., New York, N Y 1859
Marston, Alonzo W., Hull, Q 1871
Marston, John J., U S Army 1863
Martel, Ovide, Montreal, Q 1883
Mason, J. L., M.A., Brailsford, Derby, Eng 1863
Mattice, Rich J., Cornwall, O 1875
†Mathieson, John H., St Mary's, O 1871
*Mathieson, Niel, 1870
Mayrand, William, St Andrews, Q 1847
Meane, John, Staff Srg. Maj. Army 1869
Meek, James A., New York 1875
*Meigs, Malcolm R., 1865
Menzies, John B., Ft. Gratiot, Mich 1879
*Meredith, Thomas L. B., 1842
Metcalf, Henry J., Thurso, Q 1873
Mewburn, F. H., Winnipeg, Man 1881
Mignault, Henri A., St Denis, Q 1869
Mignault, L. D., B.A., Montreal, Q 1889
Miller, R., Surg. N. W. Mounted Police, Battleford, N W T 1879
Mills, Thos. W., M.A., Montreal, Q 1873
Miner, Frank L., Abercorn, Q 1877
*Mines, William W., 1874
Mitchell, Fred. H., Winnipeg, Man 1871
Moffatt, John Edw. Staff Sur. Army 1862
Moffat, Walter, Pensacola, Fla 1868
Molson, William A., Montreal 1874
Mongenais, Napoléon, Rigaud, Q 1865
Monk, Geo. H., Dillonton, Q 1875
Moore, Charles S., London, O 1874
Moore, Jehiel T., Tilsonburg, O 1874
Moore, Joseph, 1852
Moore, Richard, 1853
Moore, Robert C., St. Paul, Minn., O 1869
Moore, William, Algonac, Mich 1881
*Morin, Josh. [Hon], 1859
*Morrison, David R., 1869
Morrison, John, M.A., Waddington N Y 1872
Mount, John W., Montreal, Q 1851
Munro, Alexander, Montreal, Q 1876
Munro, James T., Dominionville, O 1872
Muckey F. S., Medford, Min 1883
*Murray, Charles H., B.A., 1876
Musgrove, W. J., W. Winchester, O 1882
Neilson, W. J., Winnipeg, Man 1878
Nelles, J. M., Canton, Ill 1875
Nelles, John A., London, O 1850
*Nelson, Horace, 1851
*Nelson, Wolfred [Hon], 1848
Nelson, Wolfred D. E., Panama, C.A. 1872
Nicol, William R., Watkins, N Y 1872
*Nicholls, Chs. R., 1862
Nesbitt, James A., Eureka, Nev. 1868
Norton, Thomas, Horning's Mills, O 1874
Oakley, William D., Streetsville, O 1877
O'Brien, Thomas B. P., Srg. Maj. Army 1862
O'Brian, Robert S., Nanaimo, B C 1873
O'Brien, David, Renfrew, O 1873
O'Brien, T. J. Pierce, Kansas City Mo, 1882
O'Callaghan, Cornelius H., 1854
O'Callaghan, T. A., B.A., Worcester, Mass 1880
*O'Carr, Peter 1857
*O'Connor, Daniel A., 1867
O'Dea, James J., Stapleton, Staten, Island, N. Y. 1859
Odell, William, 1849
O'Keefe, Henry, Lindsay, O 1882
Ogden, H. V., B. A. Milwaukee, Wis 1882
O'Leary, James, St Pascal, Q 1866
O'Leary, Patrick, Montreal 1859
Oliver, James W., Clifton, O 1868
O'Reilly, Charles, Toronto, O 1867
Osler, William, Montreal, Q 1872
*Padfield, Charles W., 1868
Painchaud, Edward, S. L., Varennes, Q 1848
Palmer, Loran L, Toronto, O 1866
*Paquin, Jean M., 1843
*Paradis, Henri, 1846
*Paradis, Pierre E., 1867
*Park, George A., 1877
Parker, Rufus S., Canton, Mass 1866
Parke, Charles S., Quebec 1866
*Paterson, James M., 1855
Paterson, James, Winnipeg, Man 1864
*Pattee, George, 1858
Pattee, Richard P., Plantagenet, O 1874
Pallen, Montrose A., New York 1864
*Patton, Edward K., 1867
Pegg, Austin J., Cayuga, O 1872
Pegg, Charles H., Chicago, Ill 1867
Perks, W. C., Dundas, O 1881
Perrault, Victor, St Eustache, Q 1852
Perrier, John, Cleveland, Ohio 1868
Perrigo, James, M.A., Montreal, Q 1879
Perry, H. R., Coteau Ldg., Q 1873
Phelan, C. J. R., Waterloo, Q 1865

Phelan James B., Chicago, Ill 1874
*Phelan, Joseph P., 1854
Philip, David L., Brantford, O 1863
Phippen, S. S. C., Parkhill, O 1881
*Picault, Chas., 1857
Pickup, John W., Brockville, O 1867
Pinsonneault, B., Chicago, Ill 1880
*Pinet, Alexis, 1840
Pinet, Alex. R., St Laurent, Q 1867
Poole, H. E., Ormstown, Q 1880
Poussette, A. Courthope, Sarnia, O 1860
Powell, Israel Wood, Victoria, B C 1860
Powell, Newton W., Cobourg, O 1850
†Powell, Robert H. W., Ottawa, O 1876
Powers, George W., Eaton, Q 1861
Powers, Lafontaine B., Port Hope, O 1867
Pringle, George, Cornwall, O 1855
Pringle, A. F., Northfield, Minn 1880
Prosser, Wm. O., Le Mars, Ply Co. 1874
Proudfoot, John S., Susp'on Bridge, O 1868
Proudfoot, Alex., Montreal 1869
Proulx, Phileas, Montreal 1844
*Prevost, E. Gilbert, 1859
Pulford, F. W., Stonewall, Man 1880
*Quarry, James J., 1868
*Quesnel, Jules M., 1849
Rae, John Hamilton[Hon], London Eng 1853
*Rainville, Pierre, 1863
Rambault, J., Dept. Insp. Gen. Army 1859
*Rattray, Charles J., 1871
Rattray, James C., Cobden, O 1874
Raymond, Olivier, Montreal 1850
Read, Herbert H., Halifax, N S 1861
Redner, Horace P., Lonsdale, O 1864
Reddick, Robert, West Winchester, O 1874
Reddy, Herbert L., B.A., Montreal 1876
Reddy, John [ad eun], Montreal 1856
Reed, Thomas D., Montreal 1871
Reed, John A., Sault Ste Marie, O 1871
Reid, Alex. Peter, Halifax, N S 1858
*Reid Kenneth, 1864
Reynolds, T. W., Hamilton, O 1881
Reynolds, Robert T., Berlin, O 1836
*Reynolds Thomas, 1842
Richard, Marcel, Manchester, N H 1864
Richmond, P. E., Mount Pleasant, Minn 1873
Ridley, Henry Thomas, Hamilton, O 1852
*Rielle, Etienne R. E., 1857
Riley, Oscar H., Moer's Forks, Clinton Co. N Y 1874
Rinfret, Ferdinand R., Quebec 1868
*Rintoul, David M., 1854
Richardson, John R., Archer av, Chicago 1865
Riordan, B. L., Toronto, O 1880
Ritchie, Arthur F., B.A., Duluth, Minn 1876
Ritchie, John L., Army Med. Dept. 1874
*Roberts, Edward T., 1859
Roberts, John E., B.A., Monsague, Jam., W I 1867
Robertson, James E., Montague, P E I 1865
Robertson, David, Milton, O 1864
Robertson, David T., Lennoxville, Q 1857
Robertson, Patrick, St Andrews, Q 1867
Robillard, Adolphe, Ottawa 1860
Robinson, Stephen J., Brantford, O 1876
Robinson, Wesley, Markham, O 1877
Robitaille, Louis, New Carlisle, Q 1860
Robitaille, L. T., Quebec 1858
†Roddick, Thomas G., Montreal 1868
Rodger, Thomas A., Montreal 1869
Rogers, E. J. A., Denver, Col 1881
Rogers, Amos, Ottawa, O 1874

Rooney, R. F., Auburn, Placer Co., Cal 1870
†Ross, George, M.A., Montreal 1866
†Ross, James, B.A., Dundas, O 1881
Ross, G. T. Montreal 1880
Ross, W. K., Goderich, O 1883
Ross, Thomas, Woodlands, Ca 1863
*Ross, Henry, 1872
Ross, William G., Ashburt, New Z 1871
*Ross, Wm. D., 1875
Ross, J. W., Cohoes, N Y 1881
Rugg, Henry C., Perth, O 1865
*Rumsey, William, 1859
Rutherford, M. C., Fergus Falls, Minn 1879
Rutherford, Clarendon, M.A., Chicago 1882
Rutledge, And. J., Bayfield, O 1883
Ruttan, Allen, Napanee, O 1852
Ruttan, A. M., New York 1880
*Sabourin, Moise, 1849
Sampson, James [Hon], 1847
Sanderson, George W., Toronto, O 1850
Savage, Thos. Y., Thistleton, O 1854
Savage, Alex. C., 1866
*Sawyer, James H., 1863
*Schmidt, Samuel B., 1847
*Scholfield, David T., 1854
Scott, John G., Hazeldean, Co Carlt, O 1879
Scott, Stephen A., 1854
Scott. Wm. E., Montreal 1844
Scott, Wm. F., Hull, Q 1875
Scott, W. McE., Winnipeg, Man 1883
*Scriven, George Augustus, 1846
Seager, Francis R., Brigden, O 1870
Secord, Levi, Bright, O 1876
Setree, Edward W., Heuvelton, N Y 1878
Seguin, André, Rigaud, Q 1848
Senkler, A. E., St Paul, Minn 1863
Serviss, T. W., Selina, Frisco Co., Cal 1881
Seymour, M. M., Winnipeg, Man 1879
*Sewell, Stephen C. [ad eun], 1843
Sewell, Colin [ad eun], Quebec 1869
Shanks, J. C., Howick, Q 1881
Sharpe, Wm. South Toledo, Ohio 1872
Shaw, W. F., Bracebridge, O 1879
Shaw, Alexander, Bancroft, Mich 1882
Shaver, Peter Rolph, Stratford, O 1854
Shaver, W. H., Wales, O 1882
*Shaver, R. N., 1857
Shepherd, Francis J., Montreal 1873
Sherk, George, Cheapside, O 1865
Shoebottom, Henry, Port Huron, Mich 1857
Shufelt, W. A., Brome, Q 1881
Sihler, G. A., Simcoe, O 1883
*Simard, Amable, 1852
Simpson, Thomas, Montreal 1854
Sinclair, Coll, Aylmer, O 1874
Small, H. B., Ottawa 1880
Smallwood, John R., St Clet, Q 1868
Smellie, T. S. J., M.A., Pr Arthur's Ldg, O 1877
Smiley, J. S., Rawdon, Q 1880
*Smith, Daniel D., 1868
Smith, Daniel, F., Walkerton, O 1878
Smith, E. H. Fullarton, Neb 1881
*Smith, Edward W., 1859
Smith, John, Emerson, Man 1879
Smith, Norman A., Frelighsburg, Q 1870
Smith, William, Lachute, Q 1876
Smith, Edward W., A.B. West Meriden, Conn 1882
Smythe, T. W., Colonel, 100th Regt 1848
Snider, Frederick S., Teeterville, O 1876
Sparham, Terence, Brockville, O 1841

Sparham, E. B., 1852
Spear, Andrew M., Danville, Q 1874
Spencer, R., Brandon, Man 1879
*Squire, William Wood, M.A., 1864
Stafford, Fred. J., Little Bay, Nfld 1878
Stanton, George, Simcoe, O 1868
Stark, George A., Milwaukee, Wis 1872
*Staunton, Andrew, 1846
Stephen, William, Montreal, Q 1881
Stevens, Alex. D., Dunham, Q 1857
Stevenson, Charles N., Barnston, Q 1876
Stevenson, Hans, Chelsea, Q 1880
Stevenson, J. M., Bryanston, O 1856
*Stevenson, John L., 1855
*Stevenson, John A., 1873
Stevenson, Robert A., Strathroy, O 1871
Stewart, Alexander, Palmerston, O 1872
*Stewart, John Alexander, 1862
Stewart, James, Montreal, Q 1869
Stewart, J. O., Fairfax, Lynn Co., Iowa 1880
Stephenson, James, Iroquois, O 1850
Stimp-on, Alfred O., Thompson, Pa 1868
St. John, Leonard, Chicago, Ill 1872
Storrs, Arthur, Cornwallis, N S 1876
*Strobridge, James Gordon, 1862
Struthers, A. D., Frelighsburg, Q 1881
Struthers, R. B., Allan Line Liverpl 1883
Stroud, Charles S., Norway, Benton Co., Iowa 1876
*Sutherland, Fred. Dunbar, 1864
Sutherland, Walter, Valleyfield, Q 1871
*Sutherland, William, 1836
*Sutherland, William, 1870
Sutherland, William R., Montreal 1879
Switzer, Egerton R., Salina, Ks 1865
Tabb, Silas E., M.A., Sherbrooke, Q 1869
*Tait, Henry Thomas, 1860
Taylor, Wm. H., Peterboro, O 1859
Taylor, Sullivan A., Gilmanton, N H 1870
Tew, Herbert S., Wakefield, York, Eng 1864
Temple, James A., Toronto 1865
Thayer, Linus O., Montreal 1859
*Theriault, F. D., 1863
Therien, Honore, Bedford, Q 1863
*Thompson, James, 1842
Thompson, Robert, 1852
Thompson, Wm. A., C. P. R., Matawan, Q 1882
Thornton, Hastwell W., B.A., London, Eng 1882
Tracey, A. W., West Meriden, Conn 1873
Trenholme, Edward Henry, Montreal 1862
Trudel, Eugene H., Montreal 1844
Trueman, J. E., Macan, N S 1881
Turgeon, Louis G., Montreal 1860
Tuzo, Henry A., 1853
†Tunstall Simon J., B.A., Litton, B C 1875
Usher, Henry, Walkerton, O 1861
Vannorman, J. M., Detroit, Mich 1850
Vercoe, Henry L., Seaforth, O 1865
Vicat, John R., Melbourne, Q 1867

*Deceased.

†Vineberg, Hiram N., Portage la Prairie, Man 1878
Wagner, A. Dixon, Dickinson's Ldg, O 1872
Wagner, G. C., Dickinson's Ldg, O 1881
*Wagner, William H., 1844
Wakeman, William, Gaspe, Q 1866
Wales, Benjamin N., Buckingham, Q 1874
*Walker, Robert, 1851
Wallace, Isaac U., Milton, Q 1874
Walsh Edmond C., Madrid, N Y 1866
Walton, George O., Barbadoes, W I 1873
Wanless, John R., Dunedin, New Z 1867
Ward, William T., Morristown, Minn 1873
Ward, Michael O'B., Montreal 1875
Warren, Frank, Brooklin, O 1872
*Warren, Henry, 1860
Waugh, William, London, O 1872
Weagant, C. A., Yarker, O 1879
Webb, James T. S., Montreal 1871
Webster, Arthur D., Edinburgh, S 1878
Weilbrenner, Remi, Port Neuf, Q 1851
*Weir, Richard, 1852
*Wherry, John, 1862
Whitecomb, Josiah G., Omaha 1848
Whiteford, James W., Winnipeg, Man 1873
Whiteford, Richard, Toledo, Ohio 1857
Whitwell, W. P. O., Philipsburg, Q 1860
*Whyte, Joseph A., 1870
Wigle, Hiram, Wiarton, O 1875
*Widmer, Christopher [Hon] 1847
*Wilcox, Marshall B., 1868
Williams, J., Boston, Mass 1881
Williston, H. V., M.A., Newcastle, NB 1879
Wilson, Benjamin S., Belleville, O 1866
*Wilson, Robert M., 1850
Wilson, William, Ottawa 1857
*Wilscam, John Wilbrod, 1846
Wolverton, Algernon, M.A., Hamilton, O 1867
Woods, David, Staff Surgeon Army 1860
Wood, George C., 1849
Wood, George, Faribault, Minn 1863
Wood, Ed. S., Faribault, Minn 1883
Wood, Hannibal W., Knowlton, Q 1865
Woods, Jno. J. E., Aylmer, Q 1875
Woodful, Sam., Pratt. Surg. Maj 1864
Woolway, C. J. Copper Falls, Mich 1875
*Workman, Benjamin, 1853
Workman, Joseph, Toronto 1835
Worthington, Edward [ad eun] Sherbrooke, Q 1868
Wright, John W., B.A., Picton, O 1878
Wright, Henry P., Ottawa 1872
Wright, Stephen, Ottawa, O 1859
Wright, William, Montreal 1848
Wye, John H., 22 Upper Woburn Pl, London 1868
Young, Philip A., Clarenceville, Q 1876
Young, Robert C., Ridgetown, O 1873
Youker, William, Stirling, O 1870

†Medallist.

MASTERS OF ARTS.

(For Addresses see list of Bachelors of Arts and of App. Sci.)

Allworth, Rev. John, B.A..... 1875
Amaron, Rev. Calvin E., B.A..... 1880
Archibald, John S., B.A..... 1877
*Bancroft, Rev. Charles (ad eun)..... 1856
Bancroft, Rev. C., Junior, B.A..... 1870
Baynes, Donald, B.A..... 1867
Bethune, Meredith Blenkarne, B.A... 1869
*Bothwell, John A., B.A..... 1868
Bowman, Wm. M....(Hon)..... 1859
Boyd, John, B.A..... 1864
*Butler, Rev. John....(Hon)..... 1852
Cameron, Rev. James B.A..... 1874
Carmichael, Rev. J., B.A..... 1871
Chamberlin, Browne, B.C.L. (ad eun)..... 1857
Chandler, George H., B.A..... 1879
Chapman, Rev. Charles, M.A., London Univ. (ad eun)..... 1872
Clarke, Wallace, B.A., M.D..... 1 72
Clowe, John D., B.A..... 1874
Cornish, Rev. George, B.A..... 1863
Craig, James A., B.A..... 1883
Crothers, Rev. William J., B.A..... 1875
Cunningham, Rev. Thos. E., B.A..... 1883
*Cushing, Lemuel, B.A., B.C.L..... 1867
Dart William J., B.A..... 1874
Davidson, Rev. James, B.A..... 1866
Davidson, Charles P., B.A., B.C.L..... 1867
Davidson, Leonidas H., B.A..... 1867
Dawson, William B., B.A..... 1879
Dawson, Rankine, B.A., M.D..... 882
Dey, Rev. William J., B.A..... 1875
DeWitt, Caleb J., B.A..... 1864
Dewey, Finlay McN., B.A..... 1882
Dickson, George, M.A., Victoria Col. (ad eun)..... 1879
Donald, Jas. T., B.A..... 1882
Dougall, John Redpath, B.A..... 1867
Duff, Rev. Archibald, B.A..... 1867
Duncan, Alexander E., B.A..... 1875
Ells, Robert, B.A..... 1875
Empson, Rev. John, B.A..... 1879
Forneret, Rev. George A., B.A..... 1880
*Gibb, George D., M.D....(Hon)..... 1856
Gibson, Thomas A....(Hon)..... 1856
Gilman, Francis E., B.A..... 1865
Gould, Edwin, B.A..... 1860
Graham, John H....(Hon)..... 1859
Green, Joseph, B.A..... 1864
*Haight, Frederick S., M.A., Williams Col. (ad eun)..... 1881
Hall, Rev. Wm., B.A..... 1867
Hart, Lewis A., B.A..... 1869
Hicks, Frank W., B.A..... 1870
Hindley, Rev. John, B.A..... 1873
Howe, Henry Aspinwall (Hon)..... 1855
Jones, Montgomery, B.A..... 1873
Kahler, Frederick A., B.A..... 1872
Keays, Chas. H., B.A..... 1883
Kemp, Rev. Alexander F. (Hon)..... 1863
Kennedy, George T., B.A..... 1872
Kennedy, Rev. John, B.A..... 1860
Kirby, James, B.A., B.C.L..... 1862
Krans, Rev. Edward H., B.A..... 1875
Laing, Rev. Robert, B.A..... 1877
*Leach, Robert A., B.A., B.C.L..... 1860
Lyman, A. Clarence, B.A..... 1881
Lyman, Henry H., B.A..... 1880
McCord, David R., B.A., B.C.L..... 1 67
McGregor, Duncan, B.A..... 1874
McGregor, James, B.A..... 1868
*McIntosh, John, B.A..... 1873
McLaren, John R., B.A..... 1868
McLennan, Rev. Duncan H., B.A..... 1875
Markgraf, Charles F. A....(Hon)..... 1865
Mason, James L., B.A..... 1863
Mattice, Corydon J., B.A..... 1862
Morris, Alex., B.A., B.C.L..... 1852
Morrison, Rev. James D., B.A..... 1868
Morrison, John, B.A..... 1870
Munro, Rev. Gustavus, B.A..... 1874
Newnham, Rev. Jarvois A., B.A..... 1883
*Perkins, John A., B.A..... 1862
Perrigo, James, B.A..... 1869
*Plimsoll, Reginald J., B.A..... 1867
Ramsay, Robt. A., B.A., B.C.L..... 1867
Robins, Sampson Paul, B.A..... 1868
*Rodger, David..(Hon)..... 1856
Ross, Geo., B.A., M.D..... 1866
Roy, Rev. James, M.A., Victoria Col. (ad eun)..... 1879
Shaw, Rev. W. J., M.A., Victoria Col. (ad eun)..... 1880
*Stewart, Rev. Colin Campbell, B.A..... 1870
Sweeny, James F., B.A..... 1881
Tabb, Silas Everett, B.A..... 1869
Taylor, Rev. Ernest M..... 1882
Thorburn, John....(Hon)..... 1861
Trenholme, Norman W., B.A., B.C.L. 1867
Torrance, Rev. Edward F., B.A..... 1874
Wallace, Rev. R. W., B.A..... 1875
Ward, George B., B.A..... 1880
Whillans, Rev. Robt., B.A..... 1883
Wicksteed, Richd, M., B.A., B.C.L.... 1866
*Wilkie, Daniel....(Hon)..... 1869
Wilson, John, B.A..... 1870
Wotherspoon, Ivan Tolkein, B.A..... 1869

*Deceased.

MASTERS OF ENGINEERING.

Dawson, William B., B.A., B.A.Sc..... 1880
McLeod, Clement H., B.A.Sc..... 1878
Waddell, J. A. L., B.A.Sc. (ad eund)..... 1882

MASTER OF APPLIED SCIENCE.

Thompson, Wm. T., B.A.Sc..... 1882

BACHELORS OF CIVIL LAW.

*Abbott, Christopher C..... 1850
Abbott, Harry, 11 Hospital St., Montre l 1878
Abbott, John J. C., 11 Hospital St., Montreal 1854
Abbott, John B., 11 Hospital St., Montreal..... 1874
Adam, Joseph, 38 St. James St., Montreal..... 1878
Adams, Abel, Waterloo..... 1867
Allan, Irvine..... 1882
Alguire, J. C., Montreal..... 1880
‡Archibald, John Sprott, M.A., 112 St. François Xavier St., Montreal..... 1870
Archambault, Henri..... 1874
Archambault, Joseph L. C., 488 Craig St., Montreal..... 1871
Armstrong, Louis, 11 St. James St., Montreal..... 1861
Ascher, Isidore G., Montreal..... 1868
‡Atwater, Albert W., Montreal..... 1880
Austin, Joseph E., Montreal..... 1880
Aylen, John, M.D., Aylmer, Q..... 1861
Aylen, Peter, B.A..... 1854
Aylmer, Henry, Hon., jun., Melbourne, Q..... 1881
*Badgley, Frank H..... 1852
Bagg, Robert Stanley Clark, 19 St. James St., Montreal..... 1871
Bampton, Geo. E., Lachute..... 1879
Barnard, Arch. E., Montreal..... 1882
Barnston, John G., Manitoba..... 1856
Barry, Denis, 6 St. James St., Montreal 1872
Baynes, Edward Alfred, Calgary, N.W.T. 1867
Baynes O'Hara, Winnipeg, Man..... 1874
Beaudin, Simeon, 44 St. Vincent St., Montreal..... 1878
Beauchamp, Joseph, 89 St. James St., Montreal..... 1878
Beaudet, Omer, Lotbinière, Q..... 1882
Bergeron, Horace, Beauharnois, Q..... 1877
Benjamin, Lewis N., 162 St James St., Montreal..... 1863
Beaubien Nap. H., Yamachiche, Q... 1877
Berthelot, Louis H., 7 Beaver Hall Sq., Montreal..... 1878
Berthelot, Joseph B., Montreal..... 1880
‡Bethune, Meredith B, M.A., 11 St. Sacrament St., Montreal..... 1869
Birny, Jean, B.S., Montreal..... 1880
Bisaillon, Francois Joseph, 11 Place d'Armes Hill, Montreal..... 1876
Bissonnette, Louis A., 36 St. Vincent St., Montreal..... 1878
*‡ Bothwell, John A., B.A..... 1866
Bouthillier, Charles F., 57 Union avenue, Montreal..... 1867
Boyd, John, B.A., Toronto..... 1864
Bowie, Duncan E, Montreal..... 1873
Brakenridge, James W., Montreal.... 1880
Branchaud, Athanase, 14 St. James St., Montreal..... 1862
Brooke, C. J., Richmond, Q..... 1878
Brooke, Geo. H. Aylmer, Richmond, Q. 1882
Bullock, Wm. E., B.A..... 1863
Busteed, E. B., 273 Bleury St., Montreal..... 1879
Butler, Thomas P., 34 St. James St., Montreal..... 1865
Capsey, George, Bedford, Q..... 1877
Calder, John, 67 St. Sulpice St. Montreal..... 1871
Carden, Henry..... 1860
Caron, Adolphe P., Quebec..... 1865
Carter, Christopher B., 103 St. Francois Xavier St. Montreal..... 1866
Carter, Edward, Q.C., Montreal..... 1864
Carter, George F., 31 Cadieux St. Montreal..... 1879
Chamberlin, Brown, Ottawa..... 1850
Chamberlain, John, jun..... 1867
Chambers, A., Busteed, Napanee..... 1875
Charland, Alfred..... 1863
Charette, Pierre P., Montreal..... 1877
Chauret, Amédée, Montreal..... 1873
Chauveau, Alexandre, Quebec..... 1867
Choquette, Frs. X..... 1874
Choquet, Ambroise, 42 St. Sulpice St. Montreal..... 1865
Cloran, Henry Joseph, Montreal..... 1882
Cornell Z. E., 112 St. François Xavier St. Montreal..... 1879
Coulllard, Edouard, 56 St. Gabriel St. Montreal..... 1875
Couillard, Jean B..... 1866
Coutlée, Lewis W. P., Hull, Q..... 1873
Conroy, Robert Hughes, Aylmer, Q.... 1869
Cooke, Joseph P., Montreal..... 1880
Cowan, Robert C., 235 St. James St. Montreal..... 1862
Crankshaw, James, Montreal..... 1882
Creighton, J. G. Aylwin, Montreal.... 1880
*Crimmen, W. J..... 1878
Cross, A. S., St. James St. Montreal. 1878
Cross, Alexander, Ormstown, Q..... 1881
Cross, William Heber, Montreal..... 1882
Crothers, Robert A., B.A., Bedford Q. 1878
Cruikshank, William G., 60 St. James St. Montreal..... 1872
Curran, Joseph C..... 1862
Cushing, Charles, 110 St. James St. Montreal..... 1869
*Cushing, Lemuel, jun., M.A..... 1865
Daly, J. G..... 1858
Dansereau, Arthur, Montreal..... 1865
Dansereau, Clement, 62 St. Hubert St. Montreal..... 1877
Darby, Daniel, Waterloo..... 1870
Darey, Pierre J., M.A., Montreal..... 1868
David, Alphonse, 186½ Notre Dame St. Montreal..... 1872
Davidson, Charles P., M.A., 182 St. James St. Montreal..... 1863
Davidson, Leonidas Heber, M.A., 217 St. James St. Montreal..... 1864
Day, Edmund T., 192 Notre Dame St. Montreal..... 1863
De Beaumont, Alfred L., Montreal.... 1880
Decary, Alderic, 188 St. Denis St. Montreal..... 1879
Demers, Jean Baptiste, Montreal..... 1883
De Martigny, Charles L., Montreal.... 1880
De Martigny, Alphonse L., Varennes, Q 1881
Desaulniers, Alexis L..... 1861
Desaulniers, Henri Lesieur, Montreal. 1864
Desaulniers, Dionis, 223 Notre Dame St. Montreal..... 1876
Desmarais, Odilon, St. Hyacinthe..... 1876
Des Rivieres, Rodolphe, 15 St. Vincent St. Montreal..... 1875
Desrochers, Jean L.B..... 1863
Des Rosier, Joseph, 221 St. Lawrence St. Montreal..... 1873
Dickson, W. E., Trenholmville..... 1883

Doak, George O., Coaticook, Q..... 1863
† Doherty, Charles J., 50 St. James St. Montreal..... 1876
Doherty, Thomas J., 50 St. James St. Montreal..... 1868
Dorion, Adelard A. L., 160 Notre Dame St. Montreal..... 1862
Dorion, Louis C. W., 24 St. James St. Montreal..... 1877
Doré Pierre J., Laprairie..... 1880
*Doutre, Gonzalve..... 1861
Doutre, Pierre..... 1858
Downie, D., Montreal, Q..... 1880
Driscoll, Netterville H., 64 St. James St. Montreal..... 1861
*Drummond, William D..... 1867
Dubuc, Joseph, Manitoba..... 1869
Duchesnay, Henri J. T., Beauce, Q... 1866
Duffy, Henry T., B.A., Sweetsburg, Q 1878
Duhig, John T., Quebec..... 1882
Dugas, François O., Montreal..... 1880
Duncan, Alexander E., B.A., 19 Shuter St. Montreal..... 1879
Dunlop, John, 12 Hospital St. Montreal..... 1860
Duprat, Pierre N..... 1866
Durand, Naphtalie, 67 St. Sulpice St. Montreal..... 1864
Ethier, Leandre, 352½ Lagauchetière St. Montreal..... 1879
Ethier, Marc, 25 St. Gabriel St. Montreal..... 1877
Fair, John, Junr., Montreal..... 1883
Faribault, Joseph E., L'Assomption, Q..... 1878
Farmer, Wm. O., Montreal..... 1866
Fay, John E., Knowlton, Q..... 1878
Fisher, Roswell C., Knowlton, Q..... 1869
Fisk, John J., Coaticooke..... 1868
Fleet, Charles J., B.A., 28 St. François Xavier St. Montreal..... 1879
Foran, Thomas P., 178 St. James St. Montreal..... 1870
Forget, Adelard, 64 St. Gabriel St. Montreal..... 1877
Forster, Joseph L. Montreal, Q..... 1881
Foster, George G., Knowlton, Q..... 1881
Franks, Albert W..... 1871
*Gardiner, William F..... 1856
Galarneau, Joseph Antoine..... 1864
Galbraith, William, Kingston, O..... 1875
Garon, Alphonse P..... 1882
Gaudet, Oscar, 160 Notre Dame St. Montreal..... 1878
Gauthier, Antoine N., Sault au Recollet, Q..... 1881
Gaultier, D. Z., Sorel, Q..... 1859
Gelinas, A., Manitoba..... 1876
Geoffrion, Christopher A., 24 St. James St. Montreal..... 1866
Gibb, James R., Montreal..... 1868
Gilman, Francis E., M.A., 199 St. James St. Montreal..... 1865
Girard, Alfred C., Marieville..... 1882
Girouard, Désiré, 56 St. Francois Xavier St. Montreal..... 1860
Glass, James M., 67 St. Francois Xavier St. Montreal..... 1876
‡Goldstein, Maxwell, Montreal..... 1882
‡Gordon, Asa, Aylmer, Q..... 1867
Gosselin, Jean, Quebec..... 1877
‡ Goodhue, Henry S. W. (West Indies) 1877
Goyette, Henri A., Beauharnois, Q... 1880
Grahame, Dugald, 1134 Dorchester St. Montreal..... 1878
‡ Greenshields, James N., 181 St. James St. Montreal..... 1876
Guertin, Alfred L., Montreal..... 1882
Grenier, Amédée L. W..... 1863
Guerin, Edmund W. P., B.A., Montreal..... 1881
Hackett, Michael F., Stanstead, Q.... 1874
Hague, Frederick, Montreal..... 1883
Hall, John S., B.A., 34 St. James St. Montreal..... 1875
Hall, William A., 34 St. James St. Montreal..... 1863
Hammond, Henry R. Chatham..... 1880
Harnett, Wm. de Courcy, City Hall, Montreal..... 1870
Hart, Lewis A., M.A., 194 St. James St. Montreal..... 1869
Hemming, Edward J., Arthabaska.... 1855
‡ Hodge, David W. R., B.A., Sherbrooke, Q..... 1874
Holton, Edward, 199 St. James St. Montreal..... 1865
Houghton, John G. K..... 1863
Howard, Rice M., Winnipeg..... 1869
Houliston, Alexander, Three Rivers.. 1865
Hunter, Herbert S., Montreal..... 1880
Hunter, Walter, Hamilton, Q..... 1883
*Huntingdon, Russ Wood..... 1875
Hutchins, Horace A., East Farnham.. 1883
‡ Hutchinson, Matthew, Montreal.... 1873
Ingalls, Allen G., Granby, Q..... 1881
Jackson, Samuel W., Montreal, Q.... 1861
Jenkins, George E..... 1874
Jodoin, Isaie..... 1858
Johnson, Edwin R., Stanstead, Q..... 1866
Joliffe, William J., Montreal..... 1882
Jones, Richard A. A., B A., Montreal. 1864
Joseph, Joseph O., 33 St. Gabriel St. Montreal..... 1864
Kavanagh, H. J., 117 St. François Xavier St. Montreal..... 1878
Keller, Francis J., 178 St. James St. Montreal..... 1869
*Kelly, John P..... 1862
Kemp, Edson, B.A., 235 St. James St. Montreal..... 1859
Kenny, Wm. R., Aylmer, Q..... 1865
Kirby, James, M.A., 19 St. James St., Montreal..... 1867
Kittson Geo. R. W., 60 St. James St. Montreal..... 1867
Klock, Robt. A., Montreal..... 1882
Knapp, Frederic A., 17 St. John St. Montreal..... 1877
Labadie, M. T. Adolphe, Montreal.... 1874
Labadie, Y. A. Odilon, Montreal..... 1874
Lacoste, Arthur, Montreal..... 1869
Laflamme, R. G., Montreal..... 1856
Laflamme, Léopold, 42 St. James St. Montreal..... 1869
Lafleur, Eugène, B.A., Montreal..... 1880
*Lafrenaye, P. R..... 1856
Lambe, William B., 63 St. Gabriel St. Montreal..... 1850
Lanctot, Husmer, 3 Place d'Armes Hill, Montreal..... 1878
Lanctot, Médéric, 69 Upper St. Urbain St. Montreal..... 1860
Lane, C., B.A., Montreal..... 1881
Laplante, Jean Baptiste, St. Stanislas. 1880
Lareau, Edmund (ad eun), Montreal.. 1874
Lariviere, Joseph..... 1874
Larose, Télesphore..... 1860
Lassalle, Lucien, 6 St. James St. Montreal..... 1877

Laviolette, Pierre B., 16 St. Vincent St. Montreal ... 1878
Laurier, Wilfred, Arthabaskaville, Q.. 1864
*Lay, Warren Amos ... 1867
Lawlor, Richard S., Aylmer, Q. ... 1865
Leach, David S., Montreal ... 1861
*Leach Robert A., M.A ... 1860
Lebœuf, Louis C., 57 St. Gabriel St. Montreal ... 1873
Leblanc, Albert, 23 St. Denis St. Montreal ... 1879
Ledieu, Léon, 1 St. Pierre St., St. Henri, Montreal ... 1879
‡ Lefebvre Toussaint Z., Montreal ... 1882
Lefebvre, Frédéric, 6 St. James St. Montreal ... 1863
Lebourveau, Steadman A., 63 St François Xavier St. Montreal ... 1876
Leet, Seth P., 163 St. James St. Montreal ... 1879
Leet, Lynn Tell Montreal Q ... 1883
Lighthall, W. D., B.A., Montreal ... 1881
Lighthall, George R., Montreal ... 1882
Levy, J. C. E., 20 St. Louis St. Montreal ... 1878
Lonergan, James, 34 St. James St. Montreal ... 1873
Lonergan, Michael L. S., 151 St. James St. Montreal ... 1871
Loranger, Louis George ... 1863
Lyman, Albert, B.A., Montreal ... 1881
Lyman, Elisha Stiles ... 1865
Lyman, Frederick S., B.A., 12 Hospital St. Montreal ... 1869
‡ Lynch, Wm. W., Quebec ... 1868
Mackenzie, Fred., Montreal ... 1861
Madore, Camille, Notre Dame de Grace 1880
‡ Major, David, 61 St. Gabriel St. Montreal ... 1875
Major, Edward James, 403 Guy St. Montreal ... 1871
‡ Marler, Wm. De M., B. A., 115 St, Francois Xavier St. Montreal ... 1872
‡ Martin, John E., Stafford, Q. ... 1883
Martineau, Paul G., 84 Champlain St. Montreal ... 1879
Matheson, Roderick D., Charlottetown, P.E.I ... 1883
McConnell, Arthur, Montreal, Q. ... 1883
McCord, David Ross, M.A., 131 St. James St. Montreal ... 1867
McCorkill, John C. G. S., 178 St. James St. Montreal ... 1877
McCormick, Duncan L., 112 St François Xavier St. Montreal ... 1871
McDonald, Frank H. ... 1873
McDonald, John S. ... 1876
McDougall, John W. C., Three Rivers, Q. ... 1877
McFee, Kutusoff N., B.A., Winnipeg.. 1880
* McGee, Thos. d'Arcy ... 1861
McGibbon, R. D., B.A., 103 St. François Xavier St. Montreal ... 1879
McGoun, Archibald, B.A., 1333 St. Catherine St. Montreal ... 1878
* McIntosh, John, B.A ... 1868
McKenzie, Peter, S. G., Melbourne, Q 1883
McKercher, John, Montreal ... 1880
* McKinnon, Edmund ... 1878
Maclaren, John J., 163 St. James St. Montreal ... 1868
McLaren, John Robert, M.A., 525 Sherbrooke St. Montreal ... 1859
* McLaurin, John Rice ... 1867
McLean, B. C., 19 St. Monique St. Montreal ... 1879
McLennan, William, Montreal ... 1880
McMahon, Edward M., Montreal Q ... 1881
‡ MacMaster, Donald, 181 St. James St. Montreal ... 1871
* McNaughton, Peter J ... 1879
Merry, John Westley, Sherbrooke, Q.. 1870
Messier, Damase, 56 St. Gabriel St. Montreal ... 1875
Messier, Joseph S., St. John, Q. ... 1868
‡Mignault, Pierre B., 36 St. Vincent St. Montreal ... 1878
Mitchell, Albert Ed., Sweetsburg, Q 1867
Molson, Alexander, 101 St. François Xavier St. Montreal ... 1851
Monk, Ed. Cornwallis, 182 St. James St. Montreal ... 1870
Monk, Frederick, 89 St. James St. Montreal ... 1877
Morgan, Edward A.D., Montreal ... 1882
Morrin, Pierre A., Montreal ... 1878
Morris, Alexander, M.A., Toronto, O. 1850
Morris, John L., 40 St. John St. Montreal ... 1859
Morrison, Adelard, Napierville, Que.. 1878
*Nagle, Sarsfield B ... 1862
‡Nicholls, Armine D., B.A., 48 Victoria St. Montreal ... 1879
Nichol, Thomas, M.D., LL.B., 137 Bleury St. Montreal ... 1875
Nutting, Charles A., Montreal ... 1872
Ouimet, Adolphe P., 332 Lagauchetière St. Montreal ... 1861
‡Oughtred, Allan R., Sheridan, Ont.. 1881
Painchaud, Joseph, Montreal ... 1880
Palliser, Joseph, 17 St. John St. Montreal ... 1877
Panet, Edouard A ... 1874
Papineau, Joseph G., 32 St. James St. Montreal ... 1869
Parisault, Chs. Ambroise ... 1859
Pelletier, Louis C., 446 Mignonne St. Montreal ... 1877
Perras, F. X., 4 St. James St. Montreal 1878
Perry, Joseph, New Orleans ... 1869
*Perkins, John A., M.A ... 1860
Perodeault, Narcisse, 5 St. Thérèse St. Montreal ... 1876
Piché, Aristide ... 1868
Pillet, J. Henri, Court House, Montreal ... 1879
*Plimsoll, Reginald J., M.A ... 1861
Polette, William A., Montreal, Q ... 1881
Poutré, Félix E., Montreal ... 1874
Power, Alexander W. A., Ottawa ... 1868
Prefontaine, Raymond, 14 St James St. Montreal ... 1873
Purcell, John D., 146 St. James St. Montreal ... 1877
Rainville, Henri Benjamin, 43 St. Gabriel St. Montreal ... 1873
Ramsay, Robert A., M.A., Merchants' Exchange, 11 St. Sacrament St. Montreal ... 1866
Raynes, Charles, B.A., Montreal, Q... 1881
Reddy, Wm. B. S., Montreal ... 1880
*Redpath, Wm. W., B.A., Montreal.. 1881
Ricard, Damase F. J ... 1859
Richard, Emery Edward, Battleford, N.W.T ... 1867
Richard, Edward E ... 1868
Ritchie, Wm. F., B.A., 660 Sherbrooke St. Montreal ... 1879
Rixford, Em Hawkins, San Francisco, Cal ... 1865

Robertson, David E., Lennoxville, Q.. 1883
Robidoux, J. Emery, 10 St. James St. Montreal..... 1866
Robillard, Emile..... 1874
Rochon, Charles A., 212 Notre Dame St. Montreal..... 1861
Rose, William, London, England..... 1866
Ross, Walter Lord, 11 Hospital St. Montreal..... 1879
Rutherford, Alex. C., Woodstock, Ont. 1881
Sabourin, Ernest..... 1863
Santoire, Camille, Montreal..... 1863
Sarrasin, Ferdinand Léon, 16 St. Vincent St. Montreal..... 1871
Scallon, William, Montreal..... 1876
Sexton, James Ponsonby, 59 St. François Xavier St. Montreal..... 1860
Sharp, W. Prescott, Montreal..... 1880
Short, Robert, Richmond, P.Q..... 1867
Sjostrom, Paul R. D., Sherbrooke, Q.. 1881
Smith, Robert C., Montreal, Q..... 1881
Shortiss, James, Three Rivers, Q..... 1881
Sicotte, Victor B., Cadastre Office, Montreal..... 1862
Snowdon, H. L., 67 St. François Xavier St. Montreal..... 1856
Spong, John J. R., Montreal..... 1874
St. Jean, Edmund R., Montreal..... 1879
Stephens, Charles Henry, Montreal... 1875
Stephens, George W., Merchants' Exchange, Montreal..... 1863
Stephens, Romeo H., 56 St. François Xavier St. Montreal..... 1850
Stephens, Chas. O..... 1864
Taché, Pascal, Montreal..... 1876
Tait, Melbourne, Montreal..... 1862
Taschereau, Arthur, Quebec..... 1864
Taylor, A. Dunbar, B.A., Montreal... 1878
Taylor, Reid, Montreal..... 1869
Terrill, Joseph Lee, Stanstead, Que... 1865
Torrance, Fred. W., M.A., Montreal.. 1856
Trenholme, Edward H., M.D., Montreal 1865
‡Trenholme, Norman W., M.A., Montreal..... 1865
Trudel, Bouthillier J., 75 Dubord St. Montreal..... 1879
Vandal, Philippe, 58 St. François Xavier St. Montreal..... 1861
Vilbon, Chas. A., 44 St. James St. Montreal..... 1863
Walker, William G., 112 St. François Xavier St. Montreal..... 1874
*Walsh, Thomas Joseph..... 1860
Watts, William J., B.A., Drummondville, P.Q..... 1869
Weir, Robert S., Montreal..... 1880
Weir, William A., Montreal, Q..... 1881
Weir, Frank, Montreal..... 1882
*Welsh, Alfred..... 1864
White, William J., Montreal..... 1882
Wicksteed, Richard M., M.A., Ottawa. 1868
Wight, James H..... 1868
Wood, Franc Ogilvie, 146 St. James St. Montreal..... 1870
Wotherspoon, Ivan T. (Laval), [ad eun] 11 Hospital St. Montreal..... 1868
Wright, William Mackay, B.A., Hull. 1863
Wurtele, Charles J. C., Sorel, P.Q..... 1863
Wurtele, Jonathan S. C., Montreal.... 1870

*Deceased. ‡ Elizabeth Torrance Medallists.

BACHELORS OF ARTS.

Allan, James G., († **E**), Lockport, N.S. 1873
Allan, John, (**N**), Leeds, Q..... 1874
Allen, Frank A., Huntingdon, Q..... 1880
Allworth, John..... 1872
Amaron, Calvin E., (**P** 2), Three Rivers, Q..... 1877
Ami, Henry Mark, Ottawa, O..... 1882
Anderson, Jacob de Witt, († **C**)..... 1866
Anderson, James A., Montreal..... 1877
Archibald, John Sprott, († **P**), Montreal 1867
Atwater, Albert W., Montreal..... 1877
Aylen, Peter, B.C.L., Aylmer, Ont.... 1850
Bancroft, Rev. Chas., junior, M.A., Knowlton, Q..... 1866
Barlow, Alfred E., (**N**), Montreal..... 1883
Barnston, Alexander, (†)..... 1857
Barron, Thomas J., Lachute, Q..... 1882
Bayne, George D., Montreal..... 1880
Baynes, Donald, London, Eng..... 1864
Beckett, William Henry..... 1866
Bennett, James, Montreal..... 1880
Bethune, Meredith Blenkarne, († **N**), Montreal..... 1866
Black, Chas., Granby, Q..... 1881
Black, James R..... 1874
Blackader, Alex. D., (**N**), Montreal.... 1870
Blakely, Malcolm D., Montreal..... 1878
Bland, Salem G., (Morrin), Montreal.. 1877
Bland, Charles E., († **C**), Montreal, Q.. 1883
Bockus, Charles E..... 1852
*Bothwell, John A., († **N**)..... 1864
Boyd, John, (**N** 2)..... 1861
Bracq, John C., (**P** 2), Grand Ligne, Q. 1881
Brewster, William, († **C**)..... 1865
Brooks, Charles H., († **N**) Smyrna..... 1868
Browne, Arthur Adderley, († **E**), Montreal..... 1866
Brown, Thomas..... 1853
Brown, A. J., († Morrin, Windsor Mills, Q..... 1883
Bull, Harcourt J., († **P**), Montreal.... 1880
Bullock, William E., († **C**), Milbrook, O. 1860
Cameron, James, M.A., († **M**)..... 1871
Cameron, John D., († **P**), Dewitville, Q..... 1883
Carmichael, James, Markham, Ont.... 1867
Cassels, Hamilton, (Morrin), Millichamp's Building, Adelaide St., Toronto..... 1873
Cassels, Robert, (Morrin) (**P**), Ottawa.. 1866
Chandler, George H., († **M**), 32 Lorne Avenue, Montreal..... 1875
Chipman, Clarence, Prescott, O. 1866
Chubb, Sydney C., (**N** 2), Brooklyn, N.Y..... 1877
Christie, John H., Lachute..... 1872
Clark, Wallace, († **E**)..... 1869
*Cline, John D., († **C**)..... 1871
Clowe, John D..... 1863
Cockfield, Henry, Montreal..... 1882
Cook, Archibald H., (Morrin), Quebec. 1869
Cornish, Rev. Geo., B.A., London Univ. (ad eun), Montreal..... 1856
Cox, Jacob W., Noel, Hants Co., N.S.. 1876
Craig, James A., (**P** 2), Fitzroy, O.... 1880
Craig, James, Renfrew, O..... 1874

Cross, Alexander S., († **P**), Montreal.. 1879
Crothers, W. J., (**P 2**), Phillipsburg, Q 1872
Crothers, Robt. A., († **C**), Bedford, Q.. 1876
Coussirat, Rev. Adrian D. (ad eun)... 1871
Cunningham, Thomas E., (**P 2**), Montreal... 1880
Currie, Dougald, (**E**), Crinan, O..... 1880
*Cushing, Lemuel, (*)..... 1863
Darey, J. Herbert, († **C**), Montreal.. 1880
Dart, William J., Laprairie..... 1868
Davidson, Charles Peers, Montreal.... 1863
Davidson, Rev. Jas., (ad eun), Montreal 1863
Davidson, Leonidas Heber, Montreal. 1863
Dawson, William B., († **N**), Montreal. 1874
Dawson, Rankin, (**P 2**), Montreal ... 1878
Dewey, Finlay McN. (**P 2**), Richmond, Q..... 1874
Dey, William J., (**N**), Spencerville, O. 1871
DeWitt, Caleb S., Lockport, Ill., U.S.. 1861
Dickson, James C., Trenholmeville, Q. 1883
Dixon, Wellington, († **E**), Charlottetown Royalty, P.E.I..... 1883
Donald, James T., († **N**), Montreal.... 1878
Dougall, Duncan, Windsor, Ont..... 1860
Dougall, John Redpath, Montreal..... 1860
Drummond, Chas. G. B., (**N**), Montreal 1862
Duclos, Charles A., (Morrin), Quebec.. 1881
Duff, Archibald, († **E**), Airedale College, Yorkshire, Eng..... 1864
Duffett, Henry J., Megantic, Q..... 1883
Duffey, Henry T., (**E 2**), Bedford..... 1876
Duncan, Alexander E., Montreal..... 1867
Eadie, Robert, († **C**), Oakland, O..... 1879
Elder, John, († **P**) Huntingdon, Q..... 1881
Ells, Robert, († **N**), Montreal..... 1872
Empson, John, 71 University St., Montreal..... 1874
England, Luther M., (**N**), Knowlton, Q 1883
Ewing, William, Winnipeg, Manitoba. 1878
Fairbairn, Thomas, (**P 2**)..... 1863
Falconer, Alex., († **E**), Montreal . 1881
Ferguson, James D., (Morrin), Quebec 1880
Ferguson, John S., Montreal..... 1861
Ferguson, Wm. A., († **M**), Richibucto, N.B..... 1881
*Ferrier, Robert W..... 1857
Fessenden, Elisha Jos., Chippawa, O.. 1863
Fleet, Charles J., (**E**), Montreal..... 1872
Forneret, Geo. A., Dunham Flats..... 1877
Fortin, Rev. Octave, (ad eun), Winnipeg, Man..... 1867
Fowler, William, (**N**)..... 1865
Fowler, Elbert 1868
Fraser, John, (Morrin)..... 1869
Fraser, William, Dundee, Q..... 1883
Gamble, Robt., Billings Bridge, Ont . 1881
Gibb, Charles, 80 Aylmer St., Montreal 1865
Gilman, Francis Edward, Montreal... 1862
Gore, Frederick 1861
Gould, Charles H., († **C**), Montreal. ... 1877
Gould, Edwin, Montreal..... 1856
Graham, John, († **E**), Williamstown, O 1876
Graham, John H., Ormstown, Que.... 1878
Grandy, John, Millbrook, Ont 1866
Gray, William, Union Theological Sem., New York 1876
Greenshields, Edward, († **P**), 305 Peel St. Montreal..... 1869
Greenshields, Samuel, 90 Union Av., Montreal..... 1874
Greenshields, Robert A., (†), Danville, Q..... 1883
Green Joseph, († **C**), 600 West 5th St., Cincinnati, Ohio, U.S..... 1861
Green, Lonsdale, 118 Leadenhall St., London, E. C., Eng..... 1864
Gregor, Leigh R., (**P 2**), Charlottetown, P.E.I..... 1882
Guerin, Edmund W. P., († **E**), 692 Craig St. Montreal..... 1878
Guignard, J. A., B.A., (Un. Fr.), ad eun, Ottawa..... 1883
Hague, Henry J., († **C**), Montreal, Q.. 1882
Hall, John S..... 1874
Hall, Rev. William, 30 Fort St. Montreal 1861
Hart, Lewis A., Montreal..... 1866
Harrington, Bernard J., († **N**), Montreal 1869
Harvey, Alfred, St John's, Newfound. 1874
Harvey, Charles J., St. John's, Newfoundland..... 1874
Hemming, Henry, (Morrin), Quebec... 1880
Hicks, Frank W., Montreal..... 1864
Hindley, John, Montreal..... 1868
Hodge, D. W. R. († **E**), Sherbrooke, Q. 1872
Holiday, Caleb S., Lachute, Q..... 1870
Howard, Robt., J. B. († **N**), Montreal.. 1879
Hunter, Walter, B C.L., Hamilton, O. 1883
Jones, Montgomery (**E**), Hatley, Q.... 1869
Johnston, Rev. Jas. A. († **P**), Rutland, Vermont..... 1870
Joseph, Montefiore (**N**), Quebec..... 1870
Kahler, Frederick A. († **C**), Germantown, Phil., U.S..... 1869
Keays, Charles H., Hamilton, Ont. .. 1880
Kelley, Frederick W. († **E**), Montreal.. 1871
Kemp, Edson, Montreal 1859
Kennedy, Geo. T. (**N**), Wolfville, N.S. 1868
*Kershaw, Philip G 1867
Kinnear, George, Megantic, Q..... 1883
Kirby James (†), Montreal..... 1859
Klock, Robert A., Aylmer, P.Q..... 1880
Krans, Edward H. († **E**), York. 1865
Lafleur, Eugène († **P**), Montreal..... 1877
Lafleur, Paul T. († **E**), Montreal..... 1880
Lafleur, Henri A. († **N**), Montreal, Q.. 1882
Laing, Robert, († **P**), Halifax, N.S.... 1868
Lane, Campbell, 293 Peel St., Montreal 1879
Larivière Vitalien, Roxton Falls, Q.... 1880
*Leach, Robert A..... 1857
Lee, Arch. (**C**), Pendleton, O..... 1883
*Lewis, Albert R., (**E**)..... 1869
Lighthall, William D. († **E**), Montreal. 1879
Lyman, A. Clarence, Montreal..... 1878
Lyman, Henry H. († **N**), Montreal.... 1876
Lyman, Frederick Stiles, Montreal.... 1863
Lyman, Walter E. (**M L 2**), Montreal. 1881
Mackie, John F. (†), Morrin), Point Levi, Q 1883
Major, George W., 1398 St. Catherine St, Montreal 1870
Marler, Wm. de M. († **M**), Montreal. 1868
Martin, Alfred W., Montreal..... 1882
Mason, James L..... 1859
Matheson, John, Presbyterian College, Montreal..... 1876
Mattice, Corydon J., Cornwall, O..... 1859
Maxwell, John (**N**), L'Orignal, O..... 1872
McClure, Wm. († **N**), Oshawa, O..... 1879
McConnell, Richard G., (**N**), Montreal 1879
McCord, David Ross, Montreal..... 1863
McDonald, Hector C., Flat River, P. E. I..... 1881
MacDonnell, Richard L., († **C**), Montreal 1873
MacDuff, Alexander Ramsay..... 1866
MacKay, Daniel, Pictou, N.S..... 1882
McFadyen, Allan L., Montreal..... 1878

McFee, Kutusoff N., († **P**), 30 St. Famille st., Montreal..... 1874
McGibbon, Robert D., Montreal..... 1877
McGoun, Archibald, (†**P**), Montreal... 1876
McGregor Archibald F., Listowell, O.. 1877
McGregor James, (**C**), Montreal..... 1864
McGregor, Duncan, Guelph, O..... 1771
* McIntosh, John, († **M**) 1870
McIntyre, Hector A., Manilla, O..... 1881
McKenzie, John, (Morrin)..... 1867
McKenzie, Robert, (**P**)..... 1869
McKenzie, Wm. A., (**C**), Lanark, O.... 1881
McKibbin, William M.,Edwardsburg,O 1875
McKibbin, Robert, Edwardsburg, O... 1879
McKillop, Roland, Inverness, Q..... 1878
McKillop, Peter C., Inverness..... 1882
McLaren, David C., Montreal 1878
McLaren, John R., 525 Sherbrooke St., Montreal 1856
McLaren, Harry, (†) 67 Mansfield St., Montreal..... 1858
McLean, Neil W., (Morin) (**P2**)..... 1869
McLean, Bredalbane S., Montreal..... 1869
McLennan, Duncan H., Alexandria,O. 1871
McLennan, John S., (**P**), 317 Drummond St., Montreal..... 1874
McLeod, Arch., Orwell, P.E.I..... 1881
McLeod, Duncan C., († **M**), Charlottetown, P.E.I 1873
* McLeod, Hugh..... 1866
McLeod, Findlay J., Winnipeg, Man.. 1872
McLeod, Norman, (Morrin) Brompton Gore, Q..... 1883
McNabb, Robt., Woodville, O 1881
*McOuat, Walter, (**N**)..... 1865
Macpherson,Kenneth R.(†**N**), Montreal 1881
Mercer, Walter D., Montreal..... 1880
Merritt, David, Prescott..... 1863
Molson, Charles A., († **N**), Montreal... 1880
Moore, Francis X..... 1868
Morin, Jos. L., († **ML**), Three Rivers, Mass, U.S..... 1882
Morris, William, Montreal..... 1859
Morris, Alexander, Toronto, O..... 1849
Morrison, John..... 1866
Morrison, James D., († **N**), Ogdensburg, N. Y 1865
Morrison, David W., (**E**), Ormstown,Q 1870
Muir, Andrew C., N. Georgetown, Q 1880
Muir, John F..... 1864
*Muir, Rev. E. P., (ad eun)..... 1865
Munro Gustavus, Embro, O..... 1871
Munro, Murdoch, Williamstown, L'Orignal..... 1872
*Murray, Charles H., († **N**)..... 1873
Murray, J. Ralph, († **M**), Montreal.... 1883
Naylor, W. H., († **P**), Clarendon, Q.... 1872
Newnham, Jarvois A., Lewis, Q ... 1878
O'Halloran, G. F., Cowansville, Q..... 1883
Ogilvie, Archibald N., Georgetown. Q. 1880
Oliver, Theophilus H., (Morrin) (**P2**). 1866
Parsons, Simeon H., B.A., New Brunswick (ad eun), Montreal, Q..... 1881
Pease, George H., († **C**), 120 Broadway, New York..... 1864
Pedley, Hugh, Cobourg, O..... 1875
Pedley Charles S., (**P**), Port Perry, O. 1878
Perrigo, James, (**N**), Montreal..... 1866
*Perkins, John A..... 1858
Petit, Rev. Charles B..... 1750
Phillips, Charles W..... 1852
Pillsbury, Carrol E., Augusta, Me., U.S..... 1880
*Plimsoll, Reginald J..... 1858
Porter, Jas. A., († **N**), Kemptville, O.. 1883
Pritchard, John C., (Morrin) Quebec.. 1881
Ramsay, R., Anstruther, B.C.L., († **N**), Montreal 1862
Raynes, Charles, Montreal 1880
*Redpath, George D., Montreal..... 1857
*Redpath, William W., Montreal..... 1879
Reddy, Herbert L., (**E**), Montreal . 1873
Reid, James,(**P 2**), North Mountain,O 1881
Rexford, Elson J., (**P**), Montreal..... 1876
Rielle, Norman T., († **E**), Montreal, Q.. 1882
Richardson, A. W., Montreal, Q..... 1883
Ritchie, Arthur F., (**C**) 9 West 3rd St., St. Paul, Minn..... 1873
Ritchie, Wm. F., († **C**), 660 Sherbrooke St., Montreal 1875
*Roberts, George F., (**P 2**), Montreal. 1880
Robertson Alex., († **N**), 1100 Dorchester St., Montreal..... 1870
Robertson Geo., Garafraxa, O..... 1881
Robertson, Robert, (**P**), Yarmouth, N.S..... 1877
Robins, Sampson Paul, († **M**), Montreal..... 1863
Rogers, J. H., († **P**), Huntingdon, Q... 1882
Ross, George, († **C**), Montreal 1862
Ross James, († **P**), Huntingdon, Q.... 1878
Ross L. F., Montreal, Q..... 1883
Ross J. T., (†) (Morrin), Quebec, Q 1883
Russell, Henry, (Morrin)..... 1869
Rutherford, Alex., B.C.L., Ormond. O 1881
Scott, Henry C., (Morrin) (**P**), Montreal..... 1866
Scott, Matthew H., († **N**),Bristol, Que. 1877
Scrimger, Alex., (†), Galt, O..... 1883
Scriver, Charles W., Hemmingford, Q. 1880
Shearer W. K., Athelstan, O..... 1883
Sherrill, Alvan F., († **N**), Omaha, Nebraska, U.S..... 1864
Slack, George, Montreal..... 1868
Smith, Arthur W., (**N**), Lachine, Q.. . 1882
Stethem, George T 1859
Stevens, William H., St. Johns, Q..... 1879
Stevenson, Samuel C., Montreal..... 1874
Stevenson, Rev. J. F., B.A., London Univ., (ad eun), Montreal..... 1876
Stewart, Robert, Lachute, Q..... 1882
*Stewart, Colin Campbell, († **N**)..... 1867
Stewart William S., († **C**), Charlottetown, P.E.I..... 1878
Stirling, Robt., Montreal, Q..... 1882
Stuart, Gustavus G., († **P**), Quebec.... 1875
Sweeney, James F., Franklin, Q..... 1878
Tabb, Silas Everett, (**N**) Sherbrooke, Q 1866
Taylor, Archibald D., (**C**), Montreal... 1874
Taylor, Edward T., Kingston, O..... 1878
Taylor, Ernest M., Stanstead, Q..... 1875
Thomas, Henry W., († **E**), Montreal .. 1874
Thomas, F. Wolferstan G., Montreal . 1882
Thornton, Rev. R. McA., Toronto (ad eun), Glasgow, Scotland..... 1871
Thornton, Hastwell W., (**N**), Montreal 1878
Torrance, Edward F., (**PQ**), Peterboro O..... 1871
Torrance, Frederick W., Montreal.... 1878
Torrance, John Fraser, Montreal 1872
Trenholme, Norman Wm., († **P**),Montreal..... 1868
Trenholme, Chas. W., (**N**), Montreal. 1882
Tucker, Jno. W., († **C**), Montreal, Q.. 1881
Tunstall, Simon J., (**E**), Montreal 1873
Tupper, James S., (**N**), Toronto 1871
Walker. John, (Morrin), Quebec..... 1880
Walker, Thomas 1860
Walker, George F., Waddington, N.Y., U. S 1882

Wallace, Robt. W., (P), London, O.... 1872
Ward, George B., († C), Orillia, O 1874
Warriner, Rev. William H., († E), Yorkville, O..... 1877
Watson, Alindus J., London, O.... 1876
Watts, Wm. John, (C), Drummondville, Que..... 1866
Weeks, Wm. A., Charlottetown, P.E.I. 1881
Wellwood, James, Cote des Neiges, Q.. 1878
Whillans, George, (P 2), Ottawa, O... 1872
Whillans, Robert, Ottawa..... 1872
White, William, Montreal 1881
Wicksteed, Richard M., (C), Ottawa... 1863
Wilson, John, (P) 1866
Wood, Frank O., Montreal..... 1869
Wood, Thomas F., Montreal..... 1869
Wood, Holton H., 764 Sherbrooke St., Montreal..... 1879
Wotherspoon, Ivan T., (Morrin) (P), Montreal 1866
Wright, Wm. McKay, Ottawa..... 1861

BACHELORS OF APPLIED SCIENCE.

In Civil and Mechanical Engineering.

Archbald, Hy. A., Montreal..... 1881
Boswell, St. George J., Assistant Engineer Harbour Improvements, Que. 1874
Boulden, Charles M., Millersburg, Ky., U.S..... 1878
Brodie, Robert J., Smith's Falls, O... 1873
Batcheller, Alvan A., Bedford, Q. 1875
Chipman, Willis, (N), Brockville, O... 1876
Collins, John J., Manotick, O..... 1882
Dawson Wm. B., B.A., Montreal . 1875
Dowling Donaldson Bogart, (L), Napanee, O..... 1883
Drummond, J , Manitoba 1882
Dudderidge, James, Lachute, Q 1880
Foster, Philip L., Longueuil, Q 1882
* Frothingham, John J..... 1875
Green, Thomas D., Brantford, O..... 1882
Harvey, Chas. J., B.A., St. John's Newfoundland..... 1874
Hawley, David F., Aird, Q..... 1876
Hetherington, Frederick, Quebec 1876
Hall, Richard, Chelsea Road, near Ottawa..... 1878
Hill, Arthur E., Sydney, C.B..... 1875
Jones Thos. H., Bradford, O..... 1877
Kennedy, George T., M.A., Wolfville, N.S 1873
McEvoy, Jas., Ottawa, O..... 1883
McLeod, Clement H., Montreal 1873
McLean, Alexander J., Canada Pacific railway..... 1874
Miller, Frederick F., (L), Montreal . 1882
O'Dwyer, John S., (L), Montreal 1880
Page, John, Lachine, Canada Pacific Ry 1875
Richard, Louis Napoleon, Montreal... 1881
Robertson, George S., Canada Pacific Railway..... 1874
Rogers, Richard B., Auburn, O..... 1877
Ross, George, Toronto, O..... 1875
Ross, Philip D., Montreal..... 1878
Skaife, Wilfred T., Montreal..... 1880
Smith, Richard F., Montreal, Q..... 1883
Sproule, Wm. J., Canada Pacific Ry... 1877
Stewart, Donald A., Red Rock L.S.... 1873
Swan, John, Windsor St., Montreal... 1878
Thompson, Wm. T., (N), Cannington, Ont 1877
Waddell, Robert Wm., Cobourg, O.... 1881
Waddell, J. A. L., C.E. of the Rensselaer Polytechnic Institute of Troy, N.Y. (ad eundem)..... 1882
Walbank, William McL., Union Av., Montreal..... 1877
Wardrop, Norval, Brockville, O..... 1877
Wicksteed, Henry K., Ottawa..... 1873
Wilson, Robert A., Winnipeg, Man... 1875

In Mining and Assaying.

Howard, William H., St. Andrews, Q. 1883
Low, Albert P. (N), Montreal, Q..... 1882
Robertson, William F. (N 2), Montreal 1880
Rogers, Richard B., Ashburnham, O... 1878
Spencer, Joseph Wm. (N), Univ.ty of Missouri, U.S..... 1874
Torrance, John Fraser, B.A. (N), Victoria, B.C..... 1873
Wicksteed, Henry K..... 1874
Wilkins, Dan. F. H., B.A., (Tor) (N), Chatham, O 1875

In Practical Chemistry.

Adams, Frank (N), Geological Survey, Ottawa..... 1878
Burland, Jeffrey H. (N 2), Montreal, Q..... 1882

GRADUATES IN CIVIL ENGINEERING.

Barnston, Alexander, B.A., ... 1859
Bell, Robt. (N), M.D, Geological Survey 1861
Crawford, Robert 1859
Doupe, Joseph, Winnipeg, Man. 1861
Edwards, George 1863
Frost, Geo. H., Tribune Building, N.Y. 1860
Gaviller, Maurice 1863
*Gooding, Oliver 1858
Gould, James H 1862
Kirby, Charles H., 58 Crescent St., Montreal 1860
McLennan, Christopher 1859
Reid, John Lestock, Prince Albert, Man 1863
Rixford, Gulian Pickering 1864
Ross, Arthur 1860
*Savage, Joseph 1860
Walker, Thomas, B.A 1860

[C] First Rank Honours in Classics. [C2] Second Rank do.
[E] do do do in English Literature, &c. [E2] do do
[M] do do do in Mathematics and Physics. [M] do do
[N] do do do in Natural Science. [N2] do do
[P] do do do in Mental and Moral Philosophy. [P2] do do
[ML] do do do in Modern Languages. [ML2] do do
[L] Lorne Medal for highest Standing in Examinations for Bachelor of Applied Science.

*Deceased.

† indicates the Gold Medallist for the subject denoted by the letter to which it is prefixed; or, if standing alone, for best general standing. For the titles of the Gold Medals assigned to the several subjects since 1864, see § VI, of Faculty of Arts.

In 1857, 1858, 1859, the Chapman Medal was awarded for the best general standing; 1860, 1861, 1862, for Classics; 1863 for Mental and Moral Philosophy; 1864 for Natural Science.

In 1862 the Prince of Wales Medal was awarded for Natural Science; 1863 for Mathematics and Physics; 1864 for Classics.

NOTE.—The Registrar of the University will be grateful for any corrections or additions to the addresses given in the above lists; and also for communication of titles which graduates may have acquired since their graduation.

Students of the University.

SESSION 1882–83.

McGILL COLLEGE.

FACULTY OF LAW.

FIRST YEAR.

Claxton, A. G. B.,	Montreal, Q	Jolly, J. G.,	Rockburn, Q
Clerk, A. F.,	Montreal, Q	Kane, J. J.,	Richmond, Q
Climie, W.,	Montreal, Q	McKay, A. A.,	River John, N.S
Cooke, G. F.,	Drummondville, Q	Murcheson, R. L.,	Dundee, Q
Daoust, C. R,	Lachine, Q	O'Halloran G. F.,	Cowansville, Q
Duffett, H. J.,	Megantic, Q	Smith, A. W.,	Montreal, Q
Greenshields, R. A. E.,	Danville, Q	Tremblay, L. P.,	Lacolle, Q
Hague, H. J.,	Montreal, Q		

SECOND YEAR.

Buchan, J. S.,	St. Andrew, Q	McLennan, F.,	Montreal, Q
Baril, J.,	Montreal, Q	McLennan, F. S.,	Montreal, Q
Cullen, J.,	Chateauguay, Q	Monk, A.,	Montreal, Q
Duclos, C. A.,	Montreal, Q	Rogers, J. H.,	Montreal, Q
Falconer, A.,	Montreal, Q	Riel, N. T.,	Montreal, Q
McPherson, K. R.,	Montreal, Q	Struthers, J. E.,	Phillipsburg, Q

THIRD YEAR.

Demers, J. B.,	Montreal, Q	McKenzie, P. S. G.,	Melbourne, Q
Dickson, Wm. E.,	Trenholmville, Q	Macdonald, C. R.,	Montreal, Q
Fair, John,	Montreal, Q	Martin, John E.,	Shefford, Q
Guy, E. C. P.,	Montreal, Q	Phillips, E. W. H.,	Montreal, Q
Hunter, Walter,	Hamilton, O	Robertson, D. C.,	Lennoxville, Q
Hutchins, H. A.,	East Farnham, Q	Roy, C. S.,	Montreal, Q
Hague, F.,	Montreal, Q	Tucker, H.,	Montreal, Q
McConnell, Arthur,	Montreal, Q		

Addison, James L., West Flamboro, O.
Allan, James H. B., Montreal, Q.
†Allen, Clarence E., East Farnham, Q.
Armitage, Joseph H., Newmarket, O.
Arthur, Robert H., Brighton, O.
Baird, Thomas A. D., Chesterfield, O
Bessey, Wm. C., Montreal, Q.
Birkett, Herbert S., Hamilton, O.
Blackader, Ed. H. P., Montreal, Q.
†Bowser, James C., Kingston, N.B.
Brown, W. D. H., Charlottetown, P. E. I.
Burrows, Fred. N., Drayton, O.
Cameron, Duncan A., Strathroy, O.
†Cameron, Charles E., Montreal, Q.
Campbell, Arch. W., Ingersoll, O
Casselman, E., Morrisburg, O.
Carter, Lucius H., Picton, O.
†Carruthers, George, North Bedeque, P.E.I
Cassidy, George A., Goldstone, O.
Cattenach, Walter C., Dalhousie Mills, O.
Church, John R., Aylmer, Q.
Clarke, H. J., Pembina, Dakota.
Clarke, John L., Waterloo, Q.
Comstock, Harlow M., Lawrence, Mass.
Cook, Sheldon E., Aultsville, O.
Corsan, Douglass, Woodstock, O.
Craig, Murdock A., Glen Water, O.
Crockét, W. C., B.A., Fredericton, N.B.
Daly, Walter G., Ogdensburg, N.Y.
Darey, J. Herbert, B.A., Montreal, Q.
Davies, Thomas B., New Edinboro, O.
Daze, Henry, Montreal, Q.
De Cow, Douglas McG., Dresden, O.
†Dearden, George A., Richmond, Q.
Doherty, W. W., Kingston, N.B.
Duffett, John L., Leeds, Q.
Duncan, John A., Ducanville, O.
Earl, Edgar H., Port Hope, O.
Eberts, Duncan W., Chatham, O.
Elder, John, B.A., Huntingdon, Q.
Elderkin, Edwin J., Apple River, N.S.
Fairbanks, Chas. S., Oshawa, O.
Ferguson, W. A., B.A., Richibucto, N.B.
Finley, Fred. G., Montreal, Q.
Flagg, J. D., Morrisburg, O.
†Gardner, John J., Cornwall, O.
Gairdner, Thos. M., Bayfield, O.
Gentles, John, Montreal, Q.
Gibson, James B., Cowansville, Q.
Gladman, George J., Lindsay, O.
Gooding, Charles E., Barbadoes, W. I.
Graham, George A., Hamilton, O.
Graham, John, Carp, O.
Grant, G. C. J., Kingston, Jam.
Grant, J. H. Y., Ottawa, O.
Gray, J. E , Coldstream, O.
†Gray, James, Brucefield, O.
Groves, Wesley, Carp, O.
Gustin, Smith, London, O.
Hague, John L., B.A., Montreal, Q.
Haldimand, A. W., Montreal, Q.
Hallatt, Edmund O., Truro, N.S.
Hanna, A., Harlem, O.
† Hanvey, Chas. B. H., Cleveland, Ohio.
Harkin, Fred. M., Vankleek Hill, O.
† Harrison, H. J., Moulinette, O.
Harte, J. H. M., Montreal, Q.
Haythorne, T. J., Charlottetown, P. E. I.
† Henry, W. G., Chatham, O.
† Hopkins Alfred J., Cookshire, Q.
Howey, Arthur L., Eden, O.
Hughes, P. H., Strathroy, O.
Hurdman, Henry T., Alymer, Q.
Hutchinson, James A., Goderich, O.
Irvine, Robt. T., Carp, O.
Johnson, Henry D., Charlottetown, P.E.I.
† Johnson, J. R., Farmersville, O.
Johnson, C. H., Almonte, O.
Johnstone, Hedley V., Montreal, Q.
Johnson, Wyatt G., Sherbrooke, Q.
Jolliffe, James H., B.A., Cincinnati, Ohio.
Kelly, Patrick N., Rochester, Minn.
Kennedy, Robt. A., Ottawa, O.
Kinloch, John A., Montreal, Q.
Kirkpatrick, Robt. C., Charlottetown, P.E.I.
Klock, William H., Aylmer, Q.
Landor, Thomas H., London, O.
† Lathern, John S., Yarmouth, N.S.
LePage, Geo. C., Charlottetown, P.E.I.
Leslie, Arch. Charles, Watson's Corners, O
† Loring, J. B., Sherbrooke, Q.
Lynskey, Norman T., Winnipeg, Man.
† Martel, Ovide, Montreal, Q.
Mattice, James S., Messina, N.Y.
† Maher, James J. E., Albany, N.Y.
Mackay, James M., River John, N.S.
Mackay, Eugene, Papineauville, Q.
McCollum, Ed. P., Duart, O.
† McDonald, Alex., Paisley, O.
Merritt, David B., B.A., Ottawa, O.
McDonald, Arch. L., Glen Donald, O.
McDonald, Hugh J., Alexandria, O.
McClure, William, B A., Lachute, Q.
McCormack, Norman, Pembrooke, O.
McGannon Matthew C., Prescott, O.
McGannon Thos. G., Prescott, O.

McGuaig Wm. J., Vankleek Hill, O.
McGregor, J. G. Martintown, O.
McInerney, James P., Kingston, N.B.
McKay, James, Ottawa, O.
McKenzie, James T., Plainfield, O.
† McLean, John W., Strathlorne, N.S
McLean, I. N., B.A., Pictou, N.S.
McLennan, James H., Summerside, P.E.I.
†McLeod, Archibald, B.A., Orwell, P.E.I.
McMeekan, James W., Chesterfield, O.
McMillan, Allan D., Valleyfield, Q.
McMillan, Duncan L., Alexandria, O.
McMillan, Gilbert A., Dundee Centre, Q.
†McNeill, Alex., Alberton, P.E.I.
McPherson, D. T., M.D. (Vt.), Lancaster, O.
Menzies, John, Pembroke, O.
Morgan, Vincent H., Aultsville, O.
†Muckey, Floy S., Medford, Minn.
Nelson, W. M. F., Montreal, Q.
O'Brien, Timothy, Brudenell, O.
Osborne, Alex. B., Hamilton, O.
Owens, John G., Fredericton, N.B.
Palmer, Guy F, Ottawa, O.
Park, James, Newcastle N.B.
Patterson, Richard L., Chatham, O.
Persons, C. E., M.D. (Mich.), Marshall, Minn.
†Phippen, S. S. C., Parkhill, O.
Pilon, Pierre C., St. Scholastique, Q.
Platt, Alfred T., Picton, O.
Poole, Alfred, Wakefield, Q.
Porteous, William, Pembroke, O.
Porter, James H., B.A., Kemptville, O.
Powell, Fred. H., Ottawa, O.
Raymond, Alf., Moulinette, O.
Raymond, G. H., B.A., Springfield, N.B.
Renner, W. Scott, Jordan Station, O.
Robertson, Arch. McD., Brockville, O.
Robertson, Francis D., Lennoxville, Q.
Ross, L. F., B.A., Montreal, Q.
Ross, Lewis D., Montreal, Q.
†Ross, William K., Goderich, O.
Rowat, W. M. L. Manoctic O
Rowell, George B., Abbottsford, Q.
†Rutledge And. J., Bayfield, O.
Ruttan, Robert F., B.A., Napanee, O.
Seery, F. J., Fredericton, N.B.
Schmidt, Andrew J., Faribault, Minn.
Schmidt, Augustus F., Montreal, Q.
Scott, John M., Carlton Place, O.
†Scott, Walter McE., Winnipeg, Man.
†Shaver, W. H., Wales, O.
Sharp, I. C., Sussex, N.B.
Shibley, John L., B.A., Yarker, O.
Shirriff, George R., Huntingdon, Q.
†Sihler, George A., Simcoe, Q.
Smith, Edwin H., Prescott, O.
Smith, W. A., Montreal, Q.
Smyth, Herbert E., Worcester, Mass.
Stephen, G. C., Montreal, Q.
†Stewart, Andrew, Howick, Q.
†Struthers, Robert B., Phillipsburg, Q.
Trapnell, Hugh E., Harbor Grace, Nfld.
Tupper, Freeman, Milton, N.S.
Turnbull, A. Russell, Russell, O.
Walker, Felix D., Launching, P.E.I.
Warneford, Percy H., Norton, N.B.
Welton, H. H., B.A., Wolfville, N.S.
White, Walter W., B.A., St. John, N.B.
White, F. J., Green's Pond, Nfld.
Wilson, Chas. W., Cumberland, O.
Wilson, S. F., M.A., Springfield, N.B.
Willson, James A. C., Manotick, O.
Williams, James F., Barrie, O.
Wishart, D. J. G., B.A., Madoc, O.
†Wood, Ed. S., Faribault, Minn.
Wood, Edwin G., Londesboro, O.
Worthington, A. Norreys, Sherbrooke, Q.
Young, Alf. A., Barton, Vt.
Young, J. H., Almonte, O.

FACULTY OF ARTS.

Undergraduates in Arts.

FIRST YEAR.

Bell John H.,	Kars, O
Chalmers, William W.,	Huntingdon, Q
Clerk, Ronzo H.,	Montreal, Q
Clements, Ben.,	Berthier en Haut, Q
Craig, Leslie G.,	Montreal, Q
Dalpé, W. H.,	Roxton Pond, Q
Dewar, D. L.,	Glensandfield, Q
Evans, W. Herbert,	Montreal, Q
Farlinger, Charles M.,	Dundee, Q
Fyles, William A.,	Cowansville, Q
Hibbard, Fred. W.,	Frelighsburg, Q
Holden, E. D. F.,	St. Armand Centre, Q
Holden, Rufus C.,	Montreal, Q
Kerry, John G.,	Montreal, Q
Livingstone, Colin H.,	St. John, N.B
Macdougall, John,	Ormstown, Q
McKerchar, Colin,	Glengarry, O
McOuat, John W.,	Inkerman, O
McRae, Duncan A.,	Applehill, O
Munro, Ernest,	Montreal, Q
Ogilvie, Shirley,	Montreal, Q
Patterson, William,	Ormstown, Q
Pedley, Francis,	Cobourg, O
Ritchie, Philip E.,	Montreal, Q
Rochester, William M.,	Montreal, Q
Sanders, William,	Montreal, Q
Sparling, William,	Stafford, O
Swabey, Charles,	Charlottetown, P.E.I
Stevenson, J. H.,	South Dummer, O
Thomas, S. A. A.,	Boucherville, Q
Wallace, William E.,	Montreal, Q
Wright, William,	Mohr's Corners, O
Yates, Nelson P,	Frelighsburg, Q

SECOND YEAR.

Blair, George A., Manotick, O
Budden, Hanbury, Montreal, Q
Calder, George F., Stonefield, Q
Cameron, Donald, Tiverton, O
Carmichael, James, Hamilton, O
Climie, William, Listowel, O
Colquhoun, Arthur,
Currie, Alexander, Widder, O
Currie, W. T.,
Ellis, John D., Pembroke, O
Grant, Andrew S., La Guerre, Q
Hargrave, Isaac L., High Bluff, Manitoba
Higgins, Joseph H., Brucefield, O
Jolly, James G., Rockburn, Q
Lochhead, William, Listowel, O
Macarthur, Archibald, Dalesville, Q
McKerchar, Colin, Glengarry, O
McFarlane, James A., Pontiac Co., Q
McLean, John A., Lancaster, O
McLennan, Hugh S., Montreal, Q
Macvicar, J. Harvey, Montreal, Q
Martin, J. C., Brown's Creek, P.E.I.
Osborne, Alf. C., Charlottetown, P.E.I.
Roberts, W. D., Montreal, Q
Robertson, Phillip M., Montreal, Q
Stewart, William G., Arundel, Q
Thompson, G. J. A., Harbor Grace, Nfld
Watson, Murray, Montreal, Q

THIRD YEAR.

Blackader, Edward H., Montreal, Q
Cameron, Kenneth, Montreal, Q
Christie, William, Lachute, Q
Gerrie, Andrew W., Fergus, O
Haythorne, Thos., Charlottetown, P.E.I.
Kennedy, Robert Alex., Ottawa, O
Kirkpatrick, Robert C., Montreal, Q
Larivière, Dolard, Roxton Falls, Q
Mabon, James, St. Louis de Gonzague, Q
Mackay, Adams A., River John, Pictou Co., N. S.
Marceau, James,
Massé, Godefroi, Grand Ligne, Q
Parent, M. B., St. Pie, Q
Pedley, James W., Cobourg, O
Rogers, George, Lakefield, Q
Rondeau, Samuel, St. Elizabeth, Q
Turner, Walter H., Montreal, Q
Unsworth, Joseph K., Georgetown, Q
Wright, George C., Hull, Q

FOURTH YEAR.

Barlow, Alfred E., Montreal, Q
Bland, Charles E., Montreal, Q
Cameron, John D., Dewittville, Q
Dixon, Wellington, Charlottetown, Royalty, P.E.I.
Dickson, James C.,
Duffette, Henry J.,
England, Luther M., Knowlton, Q
Fraser William, Dundee, Q
Greenshields, Robert A., Danville, Q
Hunter, Walter, Hamilton, O
Kinnear, George, Megantic, Q
Lee, Archibald, Pendleton, O
Murray, J. Ralph, Montreal, Q
O'Halloran, George F., Cowansville, Q
Porter, James A., Kemptville, O
Richardson, Alex. W., Montreal, Q
Ross, Lewis F., Montreal, Q
Scrimger, Alexander, Galt, O
Shearer, Wm. K., Athelstan, Q

Partial and Occasional.

Anderson, G. G.,
Barron, Thomas J., (B.A.), Lachute, Q
Bruneau, Joseph P., St. Constant, P.Q.
Campbell, J. C.,
Carmichael, James, Montreal, Q
Clarke, Edward J., Arthur, O
Claxton, A. G. Brook, Montreal, Q
Cross, Parnell Le Bas., Montreal, Q
Currie, D., (B.A.),
De Beaufort, Albert, Montreal, Q
Emery, Vernon H., Burlington, O
Faye, Edward G., New York City, U.S.
Fuller, George,
Gregor, Leigh, (B.A.), Charlottetown, P.E.I.
Groulx, A. B., Belle Rivière, Q
Groulx, Vilda, Belle Rivière, Q
Herridge, W. E., (B.A. Toronto), Montreal, Q
Hodges, David, Ross, Renfrew Co., O
Howard, John H., Mull, O
Internoscia, Antoine, Montreal, Q
Jamieson, Walter S., Goderich, O
Langton, Joseph F., Montreal, Q

Locke, Hugh W.,	Montreal, Q	Pinel, Joseph,	Montreal, Q
Loiselle, H. O.,	St. Philomene, Q	Rivard, Edmond S.,	Montreal, Q
Macaulay, J. J.,	Montreal, Q	Robinson, Wm.,	
McDonald, Alex.,	Mongenais, Q	Ross, Hugh,	Newbridge, O
McIlraith, John S.,	Tatlock, O	Smardon, —,	
Mackenzie, J. W., (B.A.),	Lanark, O	Speer, James C.,	South Dummer, O
McLaren, John,	Montreal, Q	Stewart, R., (B.A.),	Lachute, Q
McLean, James A.,	South Finch, O	Taylor, —,	
McLean, Donald,	Elden, P.E.I.	Trotman, Charles S.,	
McNabb, R., (B.A.),	North Mountain, O	Waddell, N.,	Metcalf, O
Marvin, G. W.,	Montreal, Q	Way, Wm. H.,	Montreal, Q
Morgan, John,		Whyte, George,	Montreal, Q

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

Brown, C. P.,	Montreal, Q	Molson, P. V.,	Montreal, Q
Dawson, G. H.,	Quebec, Q	Perkins, W. C.,	Vale Perkins, Q
Evans, N. N.,	Montreal, Q	Taylor, D.,	Waterloo, Q
Ferrier, W. F.,	Montreal, Q	Watson, T. W.,	Little Rideau, O
Johnstone, W. S.,	Hawkesbury, O	Weir, A.,	Montreal, Q
May, C. J.,	Montreal, Q		

SECOND YEAR.

Burns, J. A.,	Montreal, Q	McCarthy, J.,	Sorel, Q
Dagron, L. L.,	New York City, N.Y.	Pitcher, S. H.,	Barbados, West Indies
Fortier, S.	Leeds, Q	Reid, W. M.,	Montreal, Q
Lesage, T. W.,	Montreal, Q	Roy, J.,	Montreal, Q
Macy, E. McC.,	Melbourne, Q	Ponthier, J.,	Vankleek Hill, O
Mathewson, E. P.,	Montreal, Q	Thompson, H. V.,	Oxford, N.S.
Mignault, —,	Montreal, Q	Trenholme, C. W.,	Montreal, Q

THIRD YEAR.

Davis, A. R.,	Adolphustown, O	McKenzie, J.,	Stellarton, Pictou, N.S.
Forlong, G.,	Lachute, Q	McTaggart, D. D.,	Montreal, Q
Graham, W.,	Montreal, Q	Ogilvy, D.,	Montreal, Q
Hamilton, E. H.,	Montreal, Q	Robert, J. A.,	Beauharnois, Q
Hislop, J. L.,	Strasburg, O	Smith, C. B.,	Winona, O
McDonald J.,	Cornwall, P.E.I.	Walters, H. McD.,	Montreal, Q

FOURTH YEAR.

Dowling, D. B.,	Napanee, O	Moffatt, J.,	Walkerton, O
Howard, W. H.,	St. Andrews, Q	Smith, R. F.,	Montreal, O
McEvoy, J.,	Billings Bridge, Glo. Co., O		

Partial and Occasional.

Bramble, C.,	England	Kennedy, W. S.,	Montreal, Q
Costigan, A. H.,	Montreal, Q	Martin, G. H.,	Montreal, Q
Craven, J. B.,	Montreal, Q	Murray, W. L. T.,	Camp Creek, Oregon, U.S
Crosley, J.,	England,		
Dorval, H.,	St. Jerome, Q	Newton, C. C.,	England
Drummond, T.,	Council Bluffs, Manitoba	Shearer A.,	Montreal, Q
Hutchison, M. B.,	Montreal, Q		

MORRIN COLLEGE, QUEBEC.

FACULTY OF ARTS.

Undergraduates.

Brown, Albert J.,	Windsor Mills, Q	Myles, James Chipman,	Quebec, Q
Campbell, Henry,	Durham, Q	Rolph, Nathaniel,	Quebec, Q
Ferguson, John Archibald,	Quebec, Q	Ross, Wm. Augustine Clement,	Lake Megantic, Q
Home, Wm. Archibald,	Quebec, Q		
Laurie, Archibald,	Quebec, Q	Ross, John Theodore,	Quebec, Q
Mackie, John F.,	Point Levi, Q	Silver, Joseph Herbert,	Danville, Q
McLeod, Norman,	Brompton Gore, Q	Walters, Albert Henry,	Quebec, Q

ST. FRANCIS COLLEGE, RICHMOND, P.Q.

FACULTY OF ARTS.

Bryan, Andrew,	Richmond, Q	Parmelee, G. W.,	Richmond, Q
Bryan, George,	Richmond, Q	Warren, Joseph,	Montreal, Q
Haggart, John,	Richmond, Q		

SUMMARY.

Students in Law, McGill College,			40
" in Medicine "			188
" in Arts "	Undergraduates,		97
	Partial and Occasional,		46
" in Applied Science,	Undergraduates,		42
	Occasional,		12
" in Arts, Morrin College,	Undergraduates,		13
	Occasional,		19
" " St. Francis College,	Undergraduates,		5
	Partial and Occasional,		1
Total number of Students,			463
Deduct entered in two Faculties,			5
			458
Teachers in training in Normal Schools,			135
Pupils in Model Schools,			340
Total Students and Pupils,			933

Higher Examination of Women.

SENIOR ASSOCIATES IN ARTS.

1880.

GEORGINA HUNTER, MONTREAL.

1881.

MARGUERITA FRANCIS, MONTREAL.

School Certificates of the University.

ASSOCIATES IN ARTS.

1865.

Montgomery Jones.
John Ferguson.
Charles Cushing.
Robert H. Conroy.
Samuel Stevenson.
Wallace Clarke.
Frederick W. Evans.
Robert W. Forrester.
Edward B. Greenshields.
Montgomerie Lewis.
George Joseph Bull.
Albert Murray.
Daniel McLachlin.

1866.

Sidney Arthur Fisher.
Charles E. Porteous.
Will. W. Walkem.
Chas. G. Stewart.
Geoffrey W. Porteous.
Florence David.
Hew D. Whitney.
George W. Torrance.
Robt. M. Esdaile.

1867.

Charles H. Ferry.
James Rodger.

1867.—*Continued.*

Geoffrey W. Porteous.
Thomas C. Thomson.
Francis J. Shepherd.
Gerald Lloyd.

1868.

John Fraser Torrance.
Will. Osborne M. Cross.
Henry G. W. Badgley.
John B. Abbott.
John Gray Grant.
Thomas C. Hempsted.

1869.

Arthur F. Ritchie.
Simon J. Tunstall.
Charles R. Jones.
O'Hara Baynes.
Aaron D. M. DeSola.
Charles Jas. Fleet.
John Thos. Caldwell.
James M. Mitchell.
John Kay.
James Green.

1870.

William Bell Dawson.

1870.—*Continued.*

Archibald D. Taylor.
Hiram B. Stephens.
Henry W. Thomas.
Samuel Greenshields.
Sheringham A. Shepherd.
William McEachran.
David S. Robertson.

1875.

William D. Lighthall.
W. A. Farwell.
Robert T. B. Howard.
Charles A. Molson.

1876.

J. Herbert Darey.
Paul Theodore Lafleur.
Edwin Hudson Bisset.
Andrew G. Ross.
James R. Foster.
Frederick Mindon Cole.
William Dawson McGregor.
John Ewart.
J. Gordon Gibson.
Wilfred T. Skaife.
Charles J. Walker.

1877.

Alexander Falconer.
Thomas B. Macaulay.
Armand F. Teefy.
Mina Douglass.
M. Stuart Fraser.
William Martin.
Walter H. Snow.
Louisa McFee.
Margaret A. Mills.
Ida Papineau.
Walter E. Lyman.
Helen Macklen.
Jane Darling.
George Graham.
Murray A. Biggar.
Jessie Ross.
Eva Dawson.
Alice Cumming.
Kenneth R. Macpherson.
Walter H. Lancey.
Robert A. Wallace.
Alexander McGibbon.
Marietta Jones.
Frank Weir.
Nathaniel D. Drew.

1878.

Henri A. Lafleur.
Grace Darling.
Henry R. Fairclough.
Andrew Lawson.
William H. Boyle.
N. J. Rielle.
George Kapelle.
John B. Rose.
Lillian Martin.
Henry Cockfield.
Louisa Harrison.
David Young.
Lawrence C. Rose.
Bessie Radford.
Kate McKeand.
Maggie Stewart.
Maggie Campbell.
A. W. Martin.
Florence W. Bissett.
C. W. Trenholme.
Robert Sterling.
Maggie White.
Frederick E. Belcher.
Anna Baxter.
Minnie Greenshields.
Emma D. Meikle.
C. D. Godfrey.
Lawrence MacRae.
Neil McLennan.

1879.

James Charles Allan.
Charles Edward Bland.
George W. Hambley.
John C. Fields.
R. Norman Hudspeth.
Louisa McDonald.
Wyatt G. Johnston.
Robert Little.
Henry J. H. Petry.
Edward J. K. Noyes.
Edith Durdan.
Adolph Craft.
Richard F. Morris.
William Morris.
Duncan D. McTaggart.
Archibald McK. McMechan.
Donald John Fraser.
John Coutts.
Thomas Crawford.
Jessie McConnell.
Devereux Emmet.
Alfred E. A. Barlow.
Elizabeth Smith.
Claude L. Wheeler.
Charles McP. Holt.

1879.—*Continued.*

Maggie Osgood.
George S. Baker.
Arthur G. Weld.
William L. Murray.
Christina J. Galt.
George R. Mills.
Alexander Malcomson.
Thomas J. Tait.
Kenneth D. Young.
Albert W. Haldimand.

1880.

Edward H. P. Blackader.
William Logan.
Mary J. MacCallum.
Walter H. Turner.
Minnie H. McKean.
Mary B. Badenach.
Wm. C. Morrison.
Robert C. Kirkpatrick.
Julius T. Gnaedinger.
Richard S. Kinghorn.
Jean W. Johnston.
Norman R. Macaulay.
Hugh McLennan.
William Cherrie.
Eugene McMullan.
Elena C. Livingston.
William Christie.
James B. McNaughton.
Lyman Duff.
John D. Courtney.
Maud M. Lamb.
William Gibson.
James B. Gibson.
Frank Baker.

1881.

Frank P. Bernard.
Charles R. Daoust.
Frederick L. Barlow.
Percey E. Judge.
Peter C. Mitchell.
Alexander J. Tolmie.
William Mitchell.
Edward P. Mathewson.
Henry Munderloh.
Ellen E. Coo.
Wilfred R. Morris.
John J. Arnton.
Hanbury A. Budden.
Manson D. Teetzel.
William T. Gunn.
George H. Guy.
Charles Burkholder.
William M. Reid.
Philip M. Robertson.
Percival Tibbs.
William Reid.
Ellen F. Kemp.
Grace Foster.
Alice M. Cook.
James W. Morrice.
Ridley L. Charlton.
James H. Bissett.
Andrew Stuart.
Mary E. Clunie.
Archibald Robertson.
Arthur H. Irwin.

1882.

Albert G. B. Claxton.
Philip E. Ritchie.
Alexander R. Johnson.
John G. G. Kerry.
William S. Leslie.
Nevil N. Evans.
Charles P. Brown.
Walter F. Ferrier.
Thomas J. Vipond.
Charles J. Robertson.
William H. Evans.
John T. Crawford.
Robert S. Ross.
Ronzo H. Clerk.
Arthur Weir.
William A. Home.
Adelaide M. Bastable.
James R. Kinghorn.
Frederick H. Johnson.
Orrin Rexford.
Leslie G. Craig.
Marion Taylor.
Flora Taylor.
William Hilton.
Cecil M. Maxwell.
Ernest Munro.
Brian H. Wand.
William A. Logie.
William A. Fyles.
Mary H. Ellicott.
Harriet A. Darey.
Mary J. Metcalfe.
Emily E. Gross.
William H. Bentley.
Ernest L. Allard.
Florence N. Wilson.
George H. Dawson.
James Laurie.
Elizabeth Christie.
Elizabeth Donnelly.
Alice M. Wilson.
Laura M. McLaren.

1882—*Continued.*

Mary E. Meikle.
Christina Wilson.
James H. Woods.
Phoebe E. Elliott.
Ida F. Smith.
Jane M. Bremner.

1883.

Meredith O. Smith.
Wellington A. Cameron.
Hugh M. Patton.
Annie C. McGregor.
Hubert D. Hamilton.
Henry W. Welch.
Rowland S. Hill.
Joseph C. Barlow.
Ellen M. Clunie.
Arthur D. Fry.
Albert H. Campbell.
Alexander T. Galt.
Albert E. Holt.
Alfred P. Murray.
Geo. A. Clunie.
Howard D. Kemp.
Samuel Cummings.
Wm. J. Carmichael.
Charles B. Kingstou.
Helen B. Blackader.
Mabel Aldrich.
Charles L. Walters.
Robert B. Henderson.
Henry G. McLaren.
Wm. A. Nichols.
Edith Turner.
Alexander McLennan.
Geo. S. Cantlie.
Lawrence A. Darey.
Andrew B. Clark.
Peter Reid.
Neil B. McTaggart.
Mattie C. Murphy.
Alfred P. Bryson.
Graham B. Macpherson.
Ada A. McGowan.
Thomas R. Henderson.
Robert M. Campbell.

JUNIOR CERTIFICATES.

1875.

Charles F. Dawson.
William C. Norris.
William S. Kerry.
Frank D. Adams.

1876.

William R. Robertson.

1877.

Annie Cusack.
Lizzie Cox.
Ella Gardiner
Elizabeth Monk.
Jessie Logan.
Alexander W. Richardson.

1878.

George Ross.
David McKinnon.
Jane Wood.
Annie Troup.
Jennie Edgar.
Edwin W. Griffin.
Mary Troup.
Herbert R. Macaulay.
Jessie Stewart.
Alexander Ambrose.
Milton Vandewater.
Julie Somerville.
Maggie Osgood.
Fritz G. Gnaedinger.
Robert A. Elliott.
Dora Scott.
Frederick F. Kingston.
William H. Adams.

1879.

Margaret McCoy.
Ina Sutherland.
Hattie Dalley.
Grace Darling.
Margaret Wilson.
Augusta Pedersen.
George Corey Thomson.
Georgina Iles.
Mary Mitchell.
Arthur Mercer.

1880.

Jessie S. Greenshields.
William Graham.
Bertha Savage.
Ellie M. Cole.
David Ogilvie.
Jeannie Ross.
Lorrie Dickson.

1881.

Annie B. Barr.
Agnes H. Fairbairn.
John S. Cassils.
Martha Martin.
Mary C. Greer.

Jeannie Dickson.
Ernest Allard.
Nellie Hall.
Henry Allen.
J. W. H. Milne.

1882.

Cora Comfort.
William F. Graham.
Annie Munro.
Daniel Taylor.

1883.

John Coon.
Albert E. Botterell.
Annie Murphy.
E. Herbert Stafford.
Lucie E. Ives.

STANDING IN THE EXAMINATIONS, 1883.

No.	ASSOCIATES IN ARTS.		
3.	Meredith O. Smith (Bishop's College School, Lennoxville),	1232	Marks.
14.	Wellington A. Cameron (High School, Montreal),	1098	"
26.	Hugh M. Patton (High School, Montreal),	1096	"
11.	Annie C. McGregor (Girls' High School, Montreal),	986	"
4.	Hubert D. Hamilton (Bishop's College School, Lennoxville),	948	"
6.	Henry W. Welch (Bishop's College School, Lennoxville),	925	"
21.	Rowland S. Hill (High School, Montreal),	883	"
30.	Joseph C. Barlow (High School, Montreal),	876	"
43.	Ellen M. Clunie (Lachute Academy),	875	"
5.	Arthur D. Fry (Bishop's College School, Lennoxville),	860	"
31.	Albert H. Campbell (High School, Montreal), } equal	857	"
39.	Alexander T. Galt (McTavish School, Montreal), }		
45.	Albert E. Holt (Quebec High School,) } equal	840	"
42.	Alfred P. Murray (Private Tuition), }		
44.	Geo. A. Clunie (Lachute Academy),	837	"
22.	Howard D. Kemp (High School, Montreal),	833	"
49.	Samuel Cummings (Collegiate Institute, Hamilton),	774	"
32.	Wm. J. Carmichael (High School, Montreal),	773	"
23.	Charles B. Kingston (High School, Montreal),	764	"
9.	Helen B. Blackader (Girls' High School, Montreal),	760	"
8.	Mabel Aldrich (Compton Ladies' College),	754	"
36.	Charles L. Walters (High School, Montreal),	738	"
20.	Robert B. Henderson (High School, Montreal),	716	"
53.	Henry G. McLaren (High School, Montreal),	713	"
25.	Wm. A. Nichols (High School, Montreal),	707	"
13.	Edith Turner (Girls' High School, Montreal),	682	"
37.	Alexander McLennan (McTavish School, Montreal),	674	"
16.	Geo. S. Cantlie (High School, Montreal), } equal	669	"
19.	Lawrence A. Darey (High School, Montreal), }		
17.	Andrew B. Clark (High School, Montreal),	659	"
35.	Peter Reid (High School, Montreal),	654	"
24.	Neil B. McTaggart (High School, Montreal),	600	"
12.	Mattie C. Murphy (Girls' High School, Montreal),	590	"
41.	Alfred P. Bryson (McTavish School, Montreal),	583	"
38.	Graham B. Macpherson (McTavish School, Montreal),	574	"
10.	Ada A. McCowan (Girls' High School, Montreal),	552	"
33.	Thomas R. Henderson (High School, Montreal),	552	"
15.	Robert M. Campbell (High School, Montreal),	507	"
	JUNIOR CERTIFICATE.		
48.	John Coon (Collegiate Institute, Hamilton),	710	Marks.
2.	Albert E. Botterell (Bishop's College School, Lennoxville),	481	"
46.	Annie Murphy (Collegiate Institute, Hamilton),	468	"
27.	E. Herbert Stafford (High School, Montreal),	464	"
7.	Lucie E. Ives (Hatley Academy),	352	"

STANDING IN THE SEVERAL SUBJECTS.

[The numbers correspond with those in the preceding list. Candidates whose numbers are in parentheses are equal in standing.]

I. Preliminary.

Reading.—[At Montreal.—9, (37, 41), (10, 11, 13, 14, 23, 25, 33, 34, 40, 42, 52), (12, 17, 19, 21, 24, 36), (26, 53), (30, 39), (15, 16, 18, 20, 22, 27, 28, 29, 31, 32, 35, 38)]. [At Lennoxville.—3, (2, 8), 6, (1, 4, 5, 7)]. [At Hamilton.—51, 46, 48, (49, 50)]. [At Lachute.—43, 44]. [At Quebec.—45].

Dictation.—(25, 26, 45, 48), (3, 13, 21, 32, 38), (11, 36, 42), (14, 17, 22), (4, 9, 10, 12, 24, 33), (19, 37, 43), (2, 27, 46), (8, 16, 31), (18, 20, 29), (1, 6, 30, 53), (39, 52), (5, 7, 15, 23, 28, 35, 41, 51), 44, 49,

English Grammar.—(3, 11), 14, 8, 25, (10, 49), (9, 26), 6, (2, 22), (40, 48), 30, (17, 32, 42, 43, 46), (4, 20, 23, 39, 50), (12, 13, 29, 35, 51), (19, 31, 45, 53), (7, 21, 24), (15, 27), (5, 38, 44), 34, 1, 33, (18, 28, 41, 52), (16, 37), 36.

Arithmetic.—3, (14, 46), 51, 48, (8, 40), (6, 39), 21, (11, 30), 4, 44, (12, 43), (9, 31), 45, (13, 24, 50), (5, 49), (15, 32), 2, (17, 26), (10, 33), 36, 25, (7, 37, 41), 53, 27, (22, 38), 34, 16, (19, 20, 23, 35, 42).

Geography.—(5, 51), (18,26), (3, 8, 31, 52), (4, 9, 11, 22, 23), 30, (14, 17, 25, 49), (2, 6, 10, 23, 42, 44), (1, 32, 34, 45, 48), (19, 33, 36, 38, 46), (12, 21, 40), (20, 27), (24, 35, 41), (13, 16, 29, 53), 39, (15, 37), 50, 7, 28.

British and Canadian History.—3, 11, 26, 14, 48, (8, 50), (9, 49), (5, 6, 10, 22, 25, 42, 43), (23, 52), (30, 44), (39, 45), (4, 13, 20, 32, 34, 46), (41, 51), (1, 12, 21, 29, 35, 36), 53, (24, 31), (2, 7, 37), 27, (33, 40), 17, (18, 19), (16, 38), (15, 28).

Gospels.—(Creditable answering),—3, 6, 8, 9, 14, 20, 25, 42, 45.

II. Optional.

Latin.—(3, 26), 11, 49, 4, 6, (21, 43), 42, 9, 5, 44, 20, 40, 45, 51, 29, 39, (10, 23, 50), 1, (22, 37), 14, 27, (25, 38), 2, 41, 17 (16, 48), 15, 7, 9.

Greek.—26, 3, 14, 6, (4, 5), 20, 49, 42, 16, 44, 18, 29, 25, 22, 21, (23, 50), 40, (1, 45), 51, 37, (15, 19), 17.

French.—3, 4, 11, 43, 25, 26, (6, 14), (22, 39,) 30, 5, (1, 40), 45, (21, 36), 44, (2, 9, 13, 19, 23), 20, 29, 53, (17, 31, 35), (16, 37, 42), (8, 10), 46, 38, (33, 34), 24, 41, 32, 28, 12, 15, 18.

German.—13, 48, 36, 39, 31, 30, 53, (32, 35), 34.

Geometry.—3, 14, 39, 40, 43, 51,4 , (48, 26), (6, 49), (21, 31), 37, (16, 30), (5, 35), 22, (19, 44), 11, 23, 24, (32, 50), 34, 2, (17, 20), 53, (36, 41), 28, 45, 29, 8, 38, 1, 9, 42, (12, 33), 27, 13, 15, 25, 10.

Algebra.—3, 51, 40, 46, 49, 45, 39, 14, 6, (11, 44), 31, 48, 43, 50, 24, (8, 38), (17, 21), 37, (30, 32), 26, (7, 22), 12, 33, 19, 42, 23, 34, 53, 4, (36, 41), (13, 15), (5, 6, 18).

Trigonometry.—40, 3, 44, 14, 6, 43, 39, 31, (26, 41), 11, 21, 30, 32, 53, (9, 20), 26.

Drawing.—4, 42, (1, 35), 34, 32, 53, 33, 30, 5, 45, 36.

Botany.—11, 9, 12, 30, (10, 31), 36, 43, 53, 35, 34, 32.

Zoology.—42.

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English Language.—26, 11, 9, 14, 8, 31, 22, 30, 12, 23, (10, 32), 25, 21, 13, 45, 35, (27, 49).

English Literature.—11, 26, 9, 22, 14, 3, 13, 23, 8, 42, 12, 10, 43, 36, (21, 25, 27, 32), (31, 39, 40, 52), 35, 30, 19, (5, 16, 20), 38, 53, 4, 44, 24, 7.

History.—8, 26, (3, 11), 9, 14, 25, 10, 23, 20, 36, 5, (3, 22, 30, 32), 27, 4, 21, 17, 52, 24, 35, 16, (29, 34), 31, (19, 33), (1, 6), 28, 15.

Geography.—3, 26, 5, 50, 30, (4, 48, 52), 31, 32, (6, 49), 35, 23, 24 (14, 22), (1, 25, 29, 43). 51, (2, 21, 44), 53, (42, 45), (17, 20, 40), 39, (27, 28, 34, 46), 38, (8, 16, 33), 36, (18, 19).

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1883--84.

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Under the Regulations for the establishment of Normal Schools in the Province of Quebec, the Superintendent of Education is empowered to associate with himself for the direction of one of these Schools the Corporation of McGill University, Montreal. In accordance with this arrangement the Provincial Protestant Normal School is affiliated with the McGill University, and the following members of the Corporation of the University constitute the Committee of the Normal School for the Session of 1883-84.

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J. W. Dawson, C.M.G., LL.D., F.R.S., Vice-Chancellor of the University, *Chairman.*

Hon. James Ferrier, Senator,
Hon. F. W. Torrance, M.A., B.C.L., } Governors of McGill College.

Rev. George Cornish, LL.D.,
J. R. Dougall, M.A., } Fellows of McGill University.

William Craig Baynes, B.A., *Secretary.*

OFFICERS OF INSTRUCTION.

McGill Normal School.

Emeritus Principal and Associate Professor :

William Henry Hicks, Esq.

Sampson Paul Robins, M.A., LL.D., *Principal and Ordinary Professor of English Language and Literature and Lecturer on Art of Teaching and Natural Science.*

James McGregor, M.A., LL.D., *Ordinary Professor of Mathematics, and Instructor in Classics.*

Pierre J. Darey, M.A., B.C.L., *Associate Professor of French.*

Mr Harington Bird, *Instructor in Drawing.*

Mr. R. J. Fowler, *Instructor in Music.*

Mr. John Andrew, *Instructor in Elocution.*

Francis W. Hicks, M.A., **Assistant Professor of History and English.*

Model Schools of McGill Normal School.

Francis W. Hicks, M.A.,* *Head Master of Boys' School.*

Mr. John P. Stephen, *Assistant Master of Boys' School.*

Miss Jane A. Swallow, *Head Mistress of Girls' School.*

Miss Lucy H. Derick, *Head Mistress of Primary School.*

* With leave of absence for one year.

ANNOUNCEMENT FOR THE SESSION 1883-84.

This Institution is intended to give a thorough training to teachers, especially for the Protestant population of the Province o Quebec. This end is attained by instruction and training in the Normal School itself, and by practice in the Model Schools; and the arrangements are of such a character as to afford the greatest possible facilities to Students from all parts of the Province.

The twenty-seventh Session of this school will commence on the third of September, 1883, and will terminate on the thirtieth of June, 1884. The complete course of study extends over three years, and the Students are graded as follows :—

1. *Elementary School Class,*—Studying for the Elementary School Diploma.
2. *Model School Class,*—Studying for the Model School Diploma.
3. *Academy Class,*—Studying for the Academy Diploma.

---

1. Conditions of Admission and of obtaining Diplomas.

Candidates for admission into the Elementary School Class will be required to pass an examination in Reading, Writing, the Elements of Grammar, Arithmetic and Geography; and to produce the certificate, and sign the application, referred to in Articles 1 and 2 of the Regulations. Admission into each of the higher classes requires a knowledge of the subjects of the previous one.

Associates in Arts of the University may be admitted into the Elementary School Class, and, provided that they have passed in Geometry, Algebra and French, into the Model School Class, without examination.

In the Examinations for entrance into the Academy Class, the Principal may allow exemptions to Associates in Arts for the subjects in which at the examinations for that certificate they have passed with credit.

Each Student must produce a certificate of good moral character from the clergyman or minister of religion under whose charge he has last been, and also testimony that he has attained the age

sixteen years. He will also be required to sign a pledge to teach for three years in some Public School in the Province of Quebec.

There will be a Semi-sessional Examination at Christmas, which all Students are required to pass in order to continue in the Classes.

At the close of the first year of study Students may apply for examination for diplomas giving the right to teach in Elementary Schools; and after two years' study, or, if found qualified at the close of the first year, they will, on examination, be entitled to diplomas as teachers of Model Schools.

Students having passed the examination for the Model School Diploma, with creditable marks in Classics and Mathematics, or having otherwise advanced to the requisite knowledge, may go on to the Academy Class, and, on examination, may obtain the Academy Diploma.

Students are expected to give their whole time and attention to the work of the School, and are not permitted to engage in any other course of study or business during the sessions of the School.

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2. Privileges of Students.

On complying with the above conditions, all Students will be recognized as *Teachers-in-training*, and as such will be entitled to free tuition, with the use of text books, and to bursaries in aid of their board, not exceeding $36.00 per annum in the two first Classes, nor $80.00 in the Academy Class, should they be successful in obtaining the diploma at the final examination. A portion of this allowance will be advanced to such Students as are not resident in Montreal, on their passing the semi-sessional examination at Christmas.

Under the regulations subjoined, and with the view of extending the benefits of the School to all parts of the country, those who reside at a distance of more than ninety miles from the city of Montreal will also be entitled to a small allowance for travelling expenses, proportionate to the distance.

Students resident in Montreal may share in the Bursary Fund, on producing certificates from their ministers or clergymen that such aid is absolutely necessary to their continuing in attendance at the school.

In addition to religious instruction of a general Protestant character by the Professors, arrangements will be made for special religious instruction by ministers representing the several denominations with which the Students may be connected.

No boarding-house is attached to the institution, but every care will be taken to ensure the comfort and good conduct of the Students in private boarding-houses approved by the Principal. Board can be obtained at from $10 to $14 per month.

The Prince of Wales Medal and Prize will be given to the student taking the highest place in the Model School Class, provided that such student shall attain to the standard fixed by the Regulations of the Council of Public Instruction for this Medal.

The J. C. Wilson Prize of $40 and a Book, contributed by him as a former Student of the School, will be offered for competition to the candidates for the Elementary Diploma, and will be given for the highest aggregate number of marks.

All the preceding regulations and privileges apply to female as well as to male students.

Persons holding the degree of B.A. or M.A. of any University in the Province of Quebec may receive the Academy Diploma, on passing an examination in the Art of Teaching, and in such other subjects necessary to the Academy Diploma as may not have been included in their University Examinations.

3. Course of Study.

N.B.—The subjoined Course of Study has been designed, and all instruction in it is given, with express reference to the work of teaching.

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1. ELEMENTARY SCHOOL CLASS, STUDYING FOR THE ELEMENTARY SCHOOL DIPLOMA.

With the view of accommodating teachers who may be unable to enter at the commencement of the Session, and whose previous education may enable them to enter at a more advanced period, the course of study in this class is divided into terms, as follows :—

First Term, from September 3rd to December 21st.

(*Entrance examination as stated above.*)

English.—The structure of sentences. Orthography and orthoepy. Penmanship. The study of Macaulay's Essay on Milton.

Geography.—General view. Shape and size of the earth. Zones, parallels of latitude, and meridians. Continents and oceans.

History.—Outline of General and of Sacred History.

Arithmetic.—Simple and Compound rules, Properties of Numbers, Scales of Notation. Text-Book: Sangster's Arithmetic.

Algebra.—The Elementary rules as in Todhunter's Algebra.

Geometry.—First Book of Euclid.

Art of Teaching.—The Physical nature of children as related to Education.

French.—Brachet's Elementary French Grammar, Easy Reading and Translation. Text-Books: Brachet's Elementary French Grammar; Darey, Lectures Françaises, Dominion Phrase Book.

Natural History.—Botany, as in Gray's Text-Book.

Reading and Elocution.

Drawing.—Elements and simple outlines.

Music.—Vocal Music with Part Songs.

Second Term, January 4th to April 1st.

(*Pupils entering at the commencement of this term will be expected to pass a satisfactory examination in the subjects of the previous term.*)

English.—Structure of words. Etymology and derivation. Study of Milton's L'Allegro and Il Penseroso.

Geography.—Contour, elevations, river systems, political divisions and chief cities of America.

History.—England.

Arithmetic.—Vulgar fractions. Proportion and Percentage.

Algebra.—Simple Equations.

Geometry.—Second Book of Euclid.

Art of Teaching.—The mental nature of children as related to education.

French.—Grammar continued: including Reading, Translation, Oral and Written Exercises.

Natural History.—Continued.

Reading and Elocution.

Drawing.—Landscape, etc., in Pencil.

Music.—Elements of Vocal Music, and Part Songs.

THIRD TERM, April 1st to June 30th.

(*Pupils entering at the commencement of this term will be expected to pass a satisfactory examination in the subjects of the previous terms.*)

English.—Structure of words and sentences, with rules of syntax. Study of Tennyson's Morte d'Arthur and Dream of Fair Women.

Geography.—Contour, elevations, river systems, political divisions and chief cities of the old world.

History.—Recapitulation and Canada.

Arithmetic.—As applied to Mensuration; and general recapitulation.

Algebra.—Simple Equations of two or three unknown quantities.

Geometry.—Recapitulation and Deductions.

Art of Teaching.—The moral nature of children as related to education.

French, Natural History, Elocution, Drawing and Music.—Continued as in the previous term.

Religious Instruction will be given throughout the Session.

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2. MODEL SCHOOL CLASS, STUDYING FOR THE MODEL SCHOOL DIPLOMA.

(*Students entering this Class must have passed a satisfactory examination in the subjects of the Elementary School Class, and will be expected to attend the lectures on the Art of Teaching given in that Class. The Class will pursue its studies throughout the Session, without any definite division into terms.*)

English.—Principles of grammar and composition. Style. History of the English Language. Study of Wordsworth's White Doe of Rylstone.

Geography.—Mathematical. Detailed course of political and physical geography.

History.—Greece and Rome.

Art of Teaching.—Lectures on methods of education and school arrangements, including school laws.

Arithmetic.—Logarithmic, Algebraic and Geometric Arithmetic. Recapitulation of Commercial Arithmetic and Bookkeeping.

Algebra.—Quadratic Equations. Ratios and Progression.

Geometry.—Third, Fourth and Sixth Books of Euclid. Application to Mensuration.

Object Lessons.

Classics.—Elements of the Latin Language, as in Bryce's 1st Latin Reader.

French.—Brachet's Elementary French Grammar. Translation from French into English, and from English into French; Darey, Lectures Françaises, Dominion Phrase Book.

Agricultural Chemistry.—Principles, and application to Canadian Agriculture.

Elocution.

Drawing.—Figures from the Flat and from Models. Elements of Perspective.

Music.—Instrumental Music, Part Songs, and Rudiments of Harmony.

Religious Instruction throughout the Session.

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3. ACADEMY CLASS, STUDYING FOR THE ACADEMY DIPLOMA

Students entering this Class must have passed a creditable examination in the subjects preparatory to the Course of Study.

English Literature.—With the Model School Class.

Logic and Mental and Moral Philosophy.—Lectures by the Principal.

Mathematics.—Trigonometry. Solid Geometry and Mechanics:—Galbraith and Haughton.

Latin.—Caesar B. G., Book I; Virgil, Æneid, Book VI.; Latin Prose Composition.

Greek.—New Testament, John's Gospel; Xenophon, Anabasis Bk. I.; Grammar.

History.—Greece and Rome.

French.—As in the Model School class.

Elocution.

Drawing.

All pupils of this Class who have not previously done so must attend lectures on the Art of Teaching in the Elementary and Model School Classes, and must teach in the McGill Model Schools at least six hours weekly as directed by the Principal.

EXTRACTS FROM THE REGULATIONS.

Special Regulations for the admission of Teachers-in-training.

Article First.—Any person desirous of being admitted as a Teacher-in-training must apply to the Principal of the Normal School, who, on his producing an extract from the Register of Baptisms, or other evidence, showing that he is full sixteen years of age, with the certificate of character and conduct required by the 6th article of the General Rules and Regulations, approved by His Excellency the Governor-General in Council, on the 22nd December, 1856, shall examine the candidate.

If upon his examination it is found that the candidate can read and write sufficiently well, knows the Rudiments of Grammar in his mother tongue, Arithmetic as far as the rule of three inclusively, and has some knowledge of Geography, the Principal shall grant him a certificate.

Article Second.—The candidate having thus obtained the certificate of the Principal, shall then (in the presence of two witnesses, who, with the Principal, shall countersign the same) sign an application in writing for admission, containing the declaration required by the 23rd general regulation. This shall be forwarded to the Superintendent of Education, together with all the certificates and other documents required, and if the whole be found correct the Superintendent shall cause the name of the candidate to be inscribed in the Register, and notice thereof shall be given to the Principal.

Article Third.—The Teachers-in-training shall state the place of their residence; and those who cannot reside with their parents will be permitted to live in boarding-houses, but in such only as shall be specially approved of. No boarding-houses having permission to board male Teachers-in-training will be permitted to receive female Teachers-in-training as boarders, and *vice versa*.

Article Fourth.—Every Teacher-in-training, on passing the examination, will be allowed a sum, not exceeding $36, to assist in paying his board. (*)

Article Fifth.—Every Teacher-in-training residing at a distance of more than ninety miles from the City of Montreal, shall be entitled to receive an allowance for travelling expenses proportionate to the distance, but not to exceed ten dollars *per annum*.

Article Sixth.—The total amount of allowances paid to Teachers-in-training under the foregoing articles shall not exceed $1,333·33 currency, yearly—that being the sum granted for that object; and when the whole of this amount is appropriated, such Teachers-in-training as may apply for admission shall not be entitled to any portion thereof until vacancies shall occur.

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* Except in the case of Teachers-in-training for the Academy Dip'oma, who may receive a sum not exceeding $80.

Special Regulations for Government and Discipline.

Article First.—Teachers-in-training guilty of drunkenness, of frequenting taverns, of entering disorderly houses or gambling houses, or keeping company with disorderly persons, or committing any act of immorality or insubordination, shall be expelled.

Article Second.—There shall be no intercourse between the male and female Teachers-in-training while in School, or when going to, or returning from it. Teachers of one sex are strictly prohibited from visiting those of the other.

Article Third.—They are on no account to be absent from their lodgings after half-past nine o'clock in the evening.

Article Fourth.—They will be allowed to attend such lectures and public meetings only as may be considered by the Principal conducive to their moral and mental improvement.

Article Fifth.—Proprietors of boarding-houses authorized by the Principal shall report to him any infraction of the rules with which they may have become acquainted.

Article Sixth.—The Professors shall have the power of excluding from the lectures for a time any student who may be inattentive to his studies, or guilty of any minor infraction of the regulations.

Article Seventh.—Teachers-in-training will be required to state with what religious denomination they are connected ; and a list of the Students connected with each denomination shall be furnished to one of the Ministers of such denomination resident in Montreal, with request that he will meet weekly with that portion of the Teachers-in-training, or otherwise provide for their religious instruction. Every Thursday after four o'clock will be assigned for this purpose.

Article Eighth.—In addition to punctual attendance at weekly religious instruction, each Student will be required to attend public worship at his own church, at least every Sunday.

Intending Students may obtain all necessary information on application to the Principal or either of the Professors.

Regulations Respecting Academy Diplomas.

Hereafter three grades of Academy Diplomas for Protestant Academies or High Schools may be granted by the Superintendent of Education, as follows :—

1. *The First Class Academy Diploma* to candidates who, being graduates in Arts of some British or Canadian University, and having taken both Latin and Greek in their course of study, have also passed the examination in the Art of Teaching in the McGill Normal School, as prescribed by its regulations,—certification of the above to be made by the Principal of the Normal School.

2. *The Second Class Academy Diploma* to candidates who have taken the Academy Diploma of the McGill Normal School or of a Board of Examiners, and have thereafter passed the second year's or intermediate examination of a University in the Province of Quebec, or (in the case of female candidates) have passed in the examinations of the Universities for Senior Associate in Arts, including the examinations in Latin and Greek,—certification of the same to be made by the University.

3. *The Third or Ordinary Academy Diploma* to candidates who have passed the examination for the same before the Normal School Examiners,—certification of the same to be made by the Principal of the Normal School.

In the distribution of the Superior Education Fund, only those Academies in which a first or second class Academy Teacher has been engaged, shall be considered to be entitled to the first and second grade of subvention from the Superior Education Fund.

THE GRADUATES' SOCIETY

OF

McGILL UNIVERSITY.

INCORPORATED 1880.

OFFICERS FOR 1883-84.

President:

J. E. ROBIDOUX, B.C.L.

Vice-Presidents:

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F. BULLER, M.D.

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CONTENTS.

I. GENERAL ANNOUNCEMENTS.

Governing Body, Officers of Instruction, General Statement, Benefactors, Calendar ..... Pages 1 to 20

II. FACULTY OF ARTS.

Admission 21
Attendance and Conduct 38
Boarding houses 37
Course of study 28
Degrees 30
Examinations 29
Exemptions from Fees 27
" in course of Study 33
Exhibitions 24
Fees 39
Honours 33
Lectures:—Ordinary 40
" Honour 47
Matriculation 21
Medals 34
Prizes 34
Scholarships 24
Time-table 52

III. FACULTY OF APPLIED SCIENCE.

Admission 54
Course of Study 57
Courses of Lectures 61
Degrees 58
Examinations 58
Exhibitions and Prizes 55
Fees 60
Text Books 66
Time table 67

IV. FACULTY OF MEDICINE.

Admission 70
Courses of Lectures 73
Degrees 77
Examinations 79
Fees 81
Hospitals 84
Medals and Prizes 80
Medical Society 84
Museum and Library 83
Past Session 87
Qualifications for Degrees 77
Rules for Students 87
Time-table 94

V. FACULTY OF LAW.

Admission 96
Course of Study 97
Degrees 101, 102
Fees 102
Regulations 99

VI. UNIVERSITY SCHOOL EXAMINATIONS.

For Associate in Arts and Junior Certificate 104
Higher Examination of Women ... 108

VII. MCGILL NORMAL SCHOOL.

Admission, &c ..... 111 and 174

VIII. UNIVERSITY LISTS, ETC.

Passed the University Examinations, 1881-82 112
Exhibitions and Scholarships 116
Prizes, Honours and Standing, 1881-82 117
Graduates 137
List of Donations 166
Library Regulations 172
Regulations for M.A 173
Students 154
School Certificates 159
Society of Graduates 185

SESSIONAL EXAMINATIONS, 1883.

ORDINARY CLASSICS.

FIRST YEAR.

TUESDAY, APRIL 3RD:—MORNING, 9 TO 12.

XENOPHON.—HELLENICS, BOOK II.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Ἀκούσας ταῦτα ὁ Θηραμένης ἀνεπήδησεν ἐπὶ τὴν Ἑστίαν καὶ εἶπεν, Ἐγὼ δ', ἔφη, ὦ ἄνδρες, ἱκετεύω τὰ πάντων ἐννομώτατα, μὴ ἐπὶ Κριτίᾳ εἶναι ἐξαλείφειν μήτε ἐμὲ μήτε ὑμῶν ὃν ἂν βούληται, ἀλλ' ὅνπερ νόμον οὗτοι ἔγραψαν περὶ τῶν ἐν τῷ καταλόγῳ, κατὰ τοῦτον καὶ ὑμῖν καὶ ἐμοὶ τὴν κρίσιν εἶναι. καὶ τοῦτο μέν, ἔφη, μὰ τοὺς θεοὺς οὐκ ἀγνοῶ, ὅτι οὐδέν μοι ἀρκέσει ὅδε ὁ βωμός, ἀλλὰ βούλομαι καὶ τοῦτο ἐπιδεῖξαι, ὅτι οὗτοι οὐ μόνον εἰσὶ περὶ ἀνθρώπους ἀδικώτατοι, ἀλλὰ καὶ περὶ θεοὺς ἀσεβέστατοι. ὑμῶν μέντοι, ἔφη, ὦ ἄνδρες καλοὶ κἀγαθοί, θαυμάζω, εἰ μὴ βοηθήσετε ὑμῖν αὐτοῖς, καὶ ταῦτα γιγνώσκοντες ὅτι οὐδὲν τὸ ἐμὸν ὄνομα εὐεξαλειπτότερον ἢ τὸ ὑμῶν ἑκάστου. ἐκ δὲ τούτου ἐκάλεσε μὲν ὁ τῶν τριάκοντα κῆρυξ τοὺς ἐνδεκα ἐπὶ τὸν Θηραμένη.

(B) Ἐκ δὲ τούτου λαβὼν ὁ Θρασύβουλος τοὺς ἀπὸ Φυλῆς περὶ χιλίους ἤδη συνειλεγμένους, ἀφικνεῖται τῆς νυκτὸς εἰς τὸν Πειραιᾶ. οἱ δὲ τριάκοντο ἐπεὶ ἤσθοντο ταῦτα, εὐθὺς ἐβοήθουν σύν τε τοῖς Λακωνικοῖς καὶ σὺν τοῖς ἱππεῦσι καὶ τοῖς ὁπλίταις. ἔπειτα ἐχώρουν κατὰ τὴν εἰς τὸν Πειραιᾶ ἀμαξιτὸν ἀναφέρουσαν. οἱ δὲ ἀπὸ Φυλῆς ἔτι μὲν ἐπεχείρησαν μὴ ἀνιέναι αὐτούς, ἐπεὶ δὲ μέγας ὁ κύκλος ὢν πολλῆς φυλακῆς ἐδόκει δεῖσθαι οὕπω πολλοῖς οὖσι, συνεσπειράθησαν ἐπὶ τὴν Μουνυχίαν. οἱ δ' ἐκ τοῦ ἄστεως εἰς τὴν Ἱπποδάμειον ἀγορὰν ἐλθόντες πρῶτον μὲν συνετάξαντο, ὥστε ἐμπλῆσαι τὴν ὁδὸν ἣ φέρει πρός τε τὸ ἱερὸν τῆς Μουνυχίας Ἀρτέμιδος καὶ τὸ Βενδίδειον· καὶ ἐγένοντο βάθος οὐκ ἔλαττον ἢ ἐπὶ πεντήκοντα ἀσπίδων. οὕτω δὲ συντεταγμένοι ἐχώρουντο ἄνω. οἱ δὲ ἀπὸ Φυλῆς ἀντενέπλησαν μὲν τὴν ὁδόν, βάθος δὲ οὐ πλέον ἢ εἰς δέκα ὁπλίτας ἐγένοντο.

(C) Εἰπὼν δὲ ταῦτα καὶ ἄλλα τοιαῦτα, καὶ ὅτι οὐδὲν δέοι ταράττεσθαι, ἀλλὰ τοῖς νόμοις τοῖς ἀρχαίοις χρῆσθαι, ἀνέστησε τὴν ἐκκλησίαν. καὶ τότε μὲν ἀρχὰς καταστησάμενοι ἐπολιτεύοντο· ὑστέρῳ δὲ χρόνῳ ἀκούσαντες ξένους

μισθοῦσθαι τοὺς Ἐλευσῖνι, στρατευσάμενοι πανδημεὶ ἐπ' αὐτοὺς τοὺς μὲν στρατηγοὺς αὐτῶν εἰς λόγους ἐλθόντας ἀπέκτειναν, τοῖς δὲ ἄλλοις εἰσπέμψαντες τοὺς φίλους καὶ ἀναγκαίους ἔπεισαν συναλλαγῆναι· καὶ ὀμόσαντες ὅρκους ἢ μὴν μὴ μνησικακήσειν, ἔτι καὶ νῦν ὁμοῦ τε πολιτεύονται καὶ τοῖς ὅρκοις ἐμμένει ὁ δῆμος.

2. (*a*) Give the dates of the events described in the above extt. (*b*) Give an account of the government of the Thirty and of the counter revolution under Thrasybulus. (*c*) Give as exactly as you can the import of the prepositions in :—(1) ἐπὶ Κριτίᾳ εἶναι. (2) ἐπὶ τον Θ. (3) ἐκ δὲ τούτου. (4) κατὰ τὴν ἀμαξιτόν. (5) οἱ ἀπὸ Φυλῆς. (6) ἐπὶ πεντ. ἀσπίδων. (*d*) Ext. (C) :—ἀνέστησε τὴν ἐκκλησίαν :—explain. ἔτι καὶ νῦν * * ὁ δῆμος :—Give the approximate date.

3. Write explanatory notes on (1) Φυλῆς. (2) τὸν Πειραιᾶ. (3) τὴν Μουνυχίαν. (4) τὸ Βενδίδειον. (5) Θέμενος τὰ ὅπλα. (6) τοὺς ἑνδεκα. (7) ἐν Κεραμεικῷ. (8) τοὺς παρόντας ἐφόρους. (9) οἱ ἔκκλητοι. (10) δύο μόρας.

4. Give as accurately as you can the meaning and etymology of the following words :—ψῆφον, παιγνιῶδες, εὐεξαλειπτότερον, δρυφάκτοις, προπετέστατος, καιρός, μάλης, ἀκρωτήρια, τριήρεις, ξύνθημα.

5. Parse the following verbs, giving the principal parts of each :—ἐπιδεῖξαι, συνειλεγμένους, συνεσπειράθησαν, ἐμπλῆσαι, τεθαμμένοι, ἐξεώσθησαν, ἐλᾶν, ἀποκλεισθείησαν, ἐπίδωσι, ἐπιδῶσι.

6. Write down (*a*) the Nom. Sing. and Plu. of :—οὖσι, ἀσπίδων, νυκτός, ἱππέων, πλήθει, ποσίν. (*b*) the Gen. and Dat. Sing. and Plu. of :—χειμών, ἐπιστολέα, χεῖρα, ναῦς, πλήρεις, πλείω. (*c*) the Acc. Sing. and Plu. of :—γίγας, γυνή, κέρας, κρατήρ, ὀδούς, βοῦς.

7. (*a*) How many classes of Adjectives are there in Greek? Write down the suffixes for the Comparative and Superlative, and compare :—ἡδύς, μέγας, εὐδαίμων, ὀξύς. (*b*) Decline :—οὗτος, αὐτός, τίς, οὐδείς. (*c*) Write down the principal Tenses (1st Sing., Ind. Act.) of :—πείθω, ἄγω, βαίνω, μένω.

INTERMEDIATE EXAMINATION.

TUESDAY, APRIL 3RD :—MORNING, 9 TO 12.

GREEK.—EURIPIDES,—MEDEA.

Examiners,..... .... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, LL.D.

1. Translate :—

(A) (Give as accurately as you can the import of the particles in this ext.)

ΑΙ. Τί γὰρ σὸν ὄμμα χρώς τε συντέτηχ' ὅδε ;
ΜΗ. Αἰγεῦ, κάκιστος ἔστι μοι πάντων πόσις.
ΑΙ. τί φῄς ; σαφῶς μοι σὰς φράσον δυσθυμίας.
ΜΗ. ἀδικεῖ μ' Ἰάσων οὐδὲν ἐξ ἐμοῦ παθών·
ΑΙ. τί χρῆμα δράσας ; φράζε μοι σαφέστερον.
ΜΗ. γυναῖκ' ἐφ' ἡμῖν δεσπότιν δόμων ἔχει.
ΑΙ. ἦ γὰρ τετόλμηκ' ἔργον αἴσχιστον τόδε ;
ΜΗ. σάφ' ἴσθ'· ἄτιμοι δ' ἐσμὲν οἱ πρὸ τοῦ φίλοι.
ΑΙ. πότερον ἐρασθεὶς ἢ σὸν ἐχθαίρων λέχος ;
ΜΗ. μέγαν γ' ἔρωτα· πιστὸς οκ ἔφυ φίλοις.
ΑΙ. ἴτω νυν, εἴπερ ὡς λέγεις ἐστὶν κακός.
ΜΗ. ἀνδρῶν τυράννων κῆδος ἠράσθη λαβεῖν.
ΑΙ. δίδωσι δ' αὐτῷ τίς ; πέραινέ μοι λόγον.
ΜΗ. Κρέων, ὃς ἄρχει τῆσδε γῆς Κορινθίας·
ΑΙ. ξυγγνωστὰ μὲν γὰρ ἦν σε λυπεῖσθαι, γύναι.
ΜΗ. ὀλωλα· καὶ πρός γ' ἐξελαύνομαι χθονός.
ΑΙ. πρὸς τοῦ ; τόδ' ἄλλο καινὸν αὖ λέγεις κακόν.
ΜΗ. Κρέων μ' ἐλαύνει φυγάδα γῆς Κορινθίας.
ΑΙ. ἐᾷ δ' Ἰάσων ; οὐδὲ ταῦτ' ἐπῄνεσα.

(B) ΙΑΣ. ὦ μῖσος, ὦ μέγιστον ἐχθίστη γύναι
θεοῖς τε κἀμοὶ παντί τ' ἀνθρώπων γένει,
ἥτις τέκνοισι σοῖσιν ἐμβαλεῖν ζίφος
ἔτλης τεκοῦσα, κἄμ' ἀπαιδ' ἀπώλεσας·
καὶ ταῦτα δράσασ' ἡλιόν τε προσβλέπεις
καὶ γαῖαν, ἔργον τλᾶσα δυσσεβέστατον.
ὀλοι' · ἐγὼ δὲ νῦν φρονῶ, τότ' οὐ φρονῶν
ὅτ' ἐκ δόμων σε βαρβάρου τ' ἀπὸ χθονὸς
Ἕλλην' ἐς οἶκον ἠγόμην, κακὸν μέγα,
πατρός τε καὶ γῆς προδότιν ἥ σ' ἐθρέψατο·
τὸν σὸν δ' ἀλάστορ' εἰς ἐμ' ἔσκηψαν θεοί·
κτανοῦσα γὰρ δὴ σὸν κάσιν παρέστιον,
τὸ καλλίπρωρον εἰσέβης Ἀργοῦς σκάφος.

ἠρξω μὲν ἐκ τοιῶνδε, νυμφευθεῖσα δὲ
παρ' ἀνδρὶ τῷδε καὶ τεκοῦσά μοι τέκνα,
εὐνῆς ἑκατι καὶ λέχους σφ' ἀπώλεσας.
οὐκ ἔστιν ἥτις τοῦτ' ἂν Ἑλληνὶς γυνὴ
ἔτλη ποθ', ὧν γε πρόσθεν ἠξίουν ἐγὼ
γῆμαί σε, κῆδος ἐχθρὸν ὀλέθριόν τ' ἐμοί,
λέαιναν, ο γυναῖκα.

2. (*a*) In ext. (A).—(1) *ἀτιμοι* * * *φίλοι* :—explain this use of the *Mas. Plu.* (2) *μέγαν ἔρωτα* :—What *Acc.*? (3) *ἔφυ* :—What tense? How do you explain the use here? (4) *ἐπήνεσα* :—What use of the *Aor.*? (*b*) In ext. (B).—(1) *μέγιστον ἐχθίστη* :—How are the *Superlatives* used? 2) *νῦν φρονῶ* :—What depends on this? (3) *εὐνῆς—λέχους* :—Derive and distinguish. (3) *κῆδος* :—Explain the meaning and express it in Latin.

3. Translate the following extt., adding an explanatory note where you see fit, aud giving the name of the speaker in each ext.:

(*a*) *προδοὺς γὰρ αὐτοῦ τέκνα δεσπότιν τ' ἐμὴν*
γάμοις Ἰάσων βασιλικοῖς εὐνάζεται,
γήμας Κρέοντος παῖδ', ὃς αἰσυμνᾷ χθονός.
(*b*) *γυνὴ γαρ τἄλλα μὲν φόβου πλέα*
κακὴ δ'ἐς ἀλκὴν καὶ σίδηρον εἰσορᾶν.
ὅταν δ'ἐς εὐνὴν ἠδικημένη κυρῇ,
οὐκ ἔστιν ἄλλη φρὴν μιαιφονωτέρα.
(*c*) *τάχ' ἐξ ὀπαδῶν χειρὸς ὠσθήσει βίᾳ.*
(*d*) *ἐπείπερ ἡμῖν τόνδ' ἐκοίνωσας λόγον,*
σέ τ' ὠφελεῖν θέλουσα καὶ νόμοις βροτῶν
ξυλλαμβάνουσα δρᾶν σ' ἀπεννέπω τάδε.

4. Parse fully the following words from the foregoing extracts, giving (1) the meaning of each word, (2) the principal parts of the verbs, (3) the derivation or composition and stem, (4) the construction :—(1) *προδούς*. (2) *αὐτοῦ*. (3) *γήμας* (with meaning of Active and Middle voices and corresponding Latin words). (4) *τἄλλα*. (5) *μιαιφονωτέρα*. (6) *ὠσθήσει*.

5. Write short explanatory notes (grammatical) on the following usages :—(1) *ἠσθετ' ἠδικημένη*. (2) *ἀτιμάσας ἔχει*. (3) *μή τι βουλεύσῃ—βουλεύῃ—νέον*. (4) *οὐ πόνων κεχρήμεθα. ξυμφορᾷ κεχρημένους*. (5) *πρόθυμος μᾶλλον ἢ σοφωτέρα*. (6) *πρὸς ἰσχύος χάριν*.

6. Parse the following words :—*τοῦ, πεσεῖν, ἥπατος, κέκρανται, ἄζυγες, ἀναλοῖς, του, σφ', ἐλᾶν, τεύξει, ἀνέπτα, δεδόκησαι*.

7. Explain the meaning of the following:—(1) *πεσσοὺς προσελθών*. (2) *κυανέας Συμπληγάδας*. (3) *ἀμφιπύλου μελάθρου*. (4) *πέμπειν ξυμβολά*. (5) *πομπαῖος ἄνα*. (6) *τένοντ' ἐς ὀρθὸν ὄμμασιν σκοπουμένη*. (7) *ἐγγὺς ἀρκύων ξίφους*. (8) *πρὸς βαλβῖδα βίου*.

8. (*a*) Conjugate the *Pres.* and *Imperf. Ind.* of *εἶμι* and *εἰμί*. (*b*) Translate (1) *οὐ φθονεῖ φράσαι*, and *μὴ φθόνει φράσαι*. (2) *οὐ γὰρ ἂν δέσποιν' ἐμὴ Μήδεια πύργους γῆς ἔπλευσ' Ἰωλκίας*, and the same omitting the particle *ἄν*. (*c*) *ζῆν*,—for what contracted? Give the other Greek verbs that contract in this manner.

9. Write down the scheme (1) of the Iambic Trimeter Acatalectic; and, (2) of the Anapaestic Dimeter Acatalectic, indicating the isochronous feet. Scan the last three verses of ext. (A).

THIRD YEAR.

GREEK.—ÆSCHYLUS.—PROMETHEUS VINCTUS.

WEDNESDAY, APRIL 11TH :—MORNING, 9 TO 12.

Examiner,..... .....REV. GEORGE CORNISH, LL.D

1. Translate :—

(A) ΚΡ. *εἶεν, τί μέλλεις καὶ κατοικτίζει μάτην ;*
τί τὸν θεοῖς ἔχθιστον οὐ στυγεῖς θεὸν,
ὅστις τὸ σὸν θνητοῖσι προὔδωκεν γέρας ;
ΠΦ. *τὸ ξυγγενές τοι δεινὸν ἦ θ' ὁμιλία.*
ΚΡ. *ξύμφημ', ἀνηκουστεῖν δὲ τῶν πατρὸς λόγων*
οἷόν τε πῶς ; οὐ τοῦτο δειμαίνεις πλέον ;
ΗΦ. *ἀεί γε δὴ νηλὴς σὺ καὶ θράσους πλέως.*
ΚΡ. *ἄκος γὰρ οὐδὲν τόνδε θρηνεῖσθαι· σὺ δὲ*
τὰ μηδὲν ὠφελοῦντα μὴ πόνει μάτην.
ΗΦ. *ὦ πολλὰ μισηθεῖσα χειρωναξία.*
ΚΡ. *τί νιν στυγεῖς ; πόνων γὰρ ὡς ἁπλῷ λόγῳ*
τῶν νῦν παρόντων οὐδὲν αἰτία τέχνη.
ΗΦ. *ἔμπας τις αὐτὴν ἄλλος ὤφελεν λαχεῖν.*
ΚΡ. *ἅπαντ' ἐπράχθη πλὴν θεοῖσι κοιρανεῖν.*
ἐλεύθερος γὰρ οὔτις ἐστὶ πλὴν Διός.
ΗΦ. *ἔγνωκα τοῖσδε κοὐδὲν ἀντειπεῖν ἔχω.*
ΚΡ. *οὔκουν ἐπείξει δεσμὰ τῷδε περιβαλεῖν,*
ὡς μή σ' ἐλινύοντα προσδερχθῇ πατήρ ;

B) *ἦν δ' οὐδὲν αὐτοῖς οὔτε χείματος τέκμαρ*
οὔτ' ἀνθεμώδους ἦρος οὔτε καρπίμου
θέρους βέβαιον, ἀλλ' ἄτερ γνώμης τὸ πᾶν

ἐπρασσον, ἐς τε δή σφιν ἀντολὰς ἐγὼ
ἄστρων ἔδειξα τάς τε δυσκρίτους δύσεις.
καὶ μὴν ἀριθμὸν ἐξοχον σοφισμάτων
ἐξεῦρον αὐτοῖς, γραμμάτων τε συνέσεις,
μνήμην θ' ἁπάντων μουσομήτορ' ἐργάτιν.
κἀζευξα πρῶτος ἐν ζυγοῖσι κνώδαλα
ζεύγλαισι δουλεύοντα· σώμασίν ' ὅπως
νητοῖς μεγίστων διάδοχοι μοχθημάτων
γένοινθ', ὑφ' ἅρματ' ἤγαγον φιληνίους
ἵππους, ἀγαλμα τῆς ὑπερπλούτου χλιδῆς

(C) ΠΡ. οὐ ταῦτα ταύτῃ μοῖρά πῳ τελεσφόρος
κρᾶναι πέπρωται, μυρίαις δέ πημοναῖς
δύαις τε καμφεὶς ὧδε δεσμὰ θφυγγάνω·
τέχνη δ' ἀνάγκης ἀσενεστέραθ μακρῷ.
ΧΟ. τίς οὖν ἀνάγκης ἐστὶν οἰακοστρόφος ;
ΠΡ. Μοῖραι τρίμορφοι μνήμονές τ' Ἐρινύες.
ΧΟ. τούτων ἄρα Ζεὺς ἐστιν ἀσθενέστερος ;
ΠΡ. οὔκουν ἂν ἐκφύγοι γε τὴν πεπρωμένην.
ΧΟ. τί γάρ πέπρωται Ζηνὶ πλὴν ἀεὶ κρατεῖν ;
ΠΟ. τοῦτ' οὐκ ἐτ' ἂν πύθοιο μηδὲ λιπάρει.
ΧΟ. ἦ πού τι σεμθνόν ἐστιν ὃ ξυναμπέχεις.
ΠΡ. ἄλλου λόγου μέμνησθε, τόνδε δ' οὐδαμῶς
καιρὸς γεγωνεῖν, ἀλλὰ συγκαλυπτέος
ὅσον μάλιστα· τόνδε γὰρ σώζων ἐγὼ
δεσμοὺς ἀεικεῖς καὶ δύας ἐκφυγγάνω.

2. (*a*) In ext. (A) comment on :—(1) ὅστις προὔδωκεν, and express it in Latin. (2) Construe τῶν λόγων. (3) ἐπράχθη,—what variant? (4) οὔκουν ἐπείξει,—to what is this equivalent? (*b*) In ext. (B) explain,—(1) δυσκρίτους δύσεις. (2) καὶ μήν,—what is the import of this phrase as here used? (3) Note the differences of *reading* and *punctuation* in vs. 8 to 13, and interpret accordingly. (*c*) In ext. (C) explain :—(1) φυγγάνω,—what use of *Tense* and *Mood*? (2) Μοῖραι τ' Ἐρινύες,—Name them, and give the etymology of these words. (3) ἄλλου λόγου,—what use of the *Gen.*? (4) λιπάρει,—give the derivation.

3. Give the meaning of the following terms :—βρώσιμον, χριστόν, πιστόν, φαρμάκων, κατεσκέλλοντο, κληδόνας δυσκρίτους, ἐνοδίους συμβόλους, δεξιοί, εὐωνύμους, σπλαγχνων λειότητα καὶ χροιάν.

4. Translate and explain the construction of the following extracts : —(*a*) ἔμπας τὶς αὐτὴν ἄλλος ὤφελεν λαχεῖν. (*b*) καὶ δὴ πρόχειρα ψάλια δέρκεσθαι πάρα. (*c*) ἐξελυσάμην βροτοὺς τοῦ μὴ διαρραισθέντας εἰς Ἅιδου μολεῖν· (*d*) τῷ τοι τοιαῖσδε πημοναῖσι κάμπτομαι, πάσχειν μὲν ἀλγειναῖσιν, οἰκτραῖσιν δ' ἰδεῖν.

5. Analyse and parse the following verbs, carefully pointing out the stem of each :—*προσέπτα, οἰκτιεῖς, προσῆξε, σαφηνιῶ, ἐξωμμάτωσα, θράξαι ἐφεῖτο, διδαχθῆ, ἀπηύρω, μολεῖν, βᾶσαι, λέλακε.*

6. (*a*) Write down the Attic for the following ;—*τύχας οὐλομένας, τάν, τᾶν, παγαῖς, τᾶς, ἀχώ, προσέβα, πωλεύμεναι.* (*b*) Explain the forms and name the dialect of *οἰκτιεῖς, βᾶσαι, πελῶ, ἦσαν.*

B.A. ORDINARY EXAMINATIONS.

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

GREEK.— { AESCHINES.—CONTRA CTESIPHONTEM.
AESCHYLUS.—PROMETHEUS VINCTUS.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, LL.D

1. Translate :—

(A) Πρῶτον μὲν τοίνυν, ὦ Ἀθηναῖοι, ἀντιγραφεὺς ἦν χειροτονητὸς τῇ πόλει, ὃς καθ' ἑκάστην πρυτανείαν ἀπελογίζετο τὰς προσόδους τῷ δήμῳ· διὰ δὲ τὴν πρὸς Εὐβουλον γενομένην πίστιν ὑμῖν οἱ ἐπὶ τὸ θεωρικὸν κεχειροτονημένοι ἦρχον μὲν, πρὶν ἢ τὸν Ἡγήμονος νόμον γενέσθαι, τὴν τοῦ ἀντιγραφέως ἀρχὴν, ἦρχον δὲ τὴν τῶν ἀποδεκτῶν, καὶ νεώριον καὶ σκευοθήκην ᾠκοδόμουν, ἦσαν δὲ καὶ ὁδοποιοὶ καὶ σχεδὸν τὴν ὅλην διοίκησιν εἶχον τῆς πόλεως. καὶ οὐ κατηγορῶν αὐτῶν οὐδ' ἐπιτιμῶν λέγω, ἀλλ' ἐκεῖνο ὑμῖν ἐνδείξασθαι βούλομαι, ὅτι ὁ μὲν νομοθέτης, ἐάν τις μιᾶς ἀρχῆς τῆς ἐλαχίστης ὑπεύθυνος ᾖ, τοῦτον οὐκ ἐᾷ, πρὶν ἂν λόγον καὶ εὐθύνας δῷ, στεφανοῦν, ὁ δὲ Κτησιφῶν Δημοσθένην τὸν συλλήβδην ἁπάσας τὰς' Ἀθήνησιν ἀρχὰς ἄρχοντα οὐκ ὤκνησε γράψαι στεφανῶσαι.

(B) Τοιγάρτοι τί τῶν ἀνελπίστων καὶ ἀπροσδοκήτων ἐφ' ἡμῶν οὐ γέγονεν ; οὐ γὰρ βίον γε ἡμεῖς ἀνθρώπινον βεβιώκαμεν, ἀλλ' εἰς παραδοξολογίαν τοῖς ἐσομένοις μεθ' ἡμᾶς ἔφυμεν. οὐχ ὁ μὲν τῶν Περσῶν βασιλεὺς, ὁ τὸν Ἄθω διορύξας, ὁ τὸν Ἑλλήσποντον ζεύξας, ὁ γῆν καὶ ὕδωρ τοὺς Ἕλληνας αἰτῶν ὁ τολμῶν ἐν ταῖς ἐπιστολαῖς γράφειν, ὅτι δεσπότης ἐστὶν ἁπάντων ἀνθρώπων ἀφ' ἡλίου ἀνιόντος μέχρι δυομένου, νῦν οὗ περὶ τοῦ κύριος ἑτέρων εἶναι διαγωνίζεται, ἀλλ' ἤδη περὶ τῆς τοῦ σώματος σωτηρίας ; καὶ τοὺς αὐτοὺς ὁρῶμεν τῆς τε δόξης ταύτης καὶ τῆς ἐπὶ τὸν Πέρσην ἡγεμονίας ἠξιωμένους, οἳ καὶ τὸ ἐν Δελφοῖς ἱερὸν ἠλευθέρωσαν; Θῆβαι δὲ, Θῆβαι πόλις ἀστυγείτων, μεθ' ἡμέραν μίαν ἐκ μέσης τῆς Ἑλλάδος ἀνήρπασται, εἰ καὶ δικαίως, περὶ τῶν ὅλων οὐκ ὀρθῶς βουλευσάμενοι, ἀλλὰ τήν γε θεοβλάβειαν καὶ τὴν ἀφροσύνην οὐκ ἀνθρωπίνης, ἀλλὰ δαιμονίως κτησάμενοι.

(C) Ἀλλ' ἐπειδὴ πάσῃ τῇ δυνάμει Δαρεῖος κατεβεβήκει, ὁ δ' Ἀλέξανδρος ἦν ἀπειλημμένος ἐν Κιλικίᾳ πάντων ἐνδεὴς, ὡς ἔφησθα σὺ, αὐτίκα μά-

λα δ' ἠμελλεν, ὡς ἦν ὁ παρὰ σοῦ λόγος, συμπατηθήσεσθαι ὑπὸ τῆς Περσικῆς ἵππου, τὴν δέ σὴν ἀηδίαν ἡ πόλις οὐκ ἐχώρει καὶ τὰς ἐπιστολὰς, ἃς ἐξηρτημένος ἐκ τῶν δακτύλων περιῇεις, ἐπιδεικνύων τισὶ τὸ ἐμὸν πρόσωπον ὡς ἐκπεπληγμένου καὶ ἀθυμοῦντος, καὶ χρυσόκερων ἀποκαλῶν καὶ κατεστέφθαι φάσκων, εἴ τι πταῖσμα συμβήσεται Ἀλεξάνδρῳ, οὐδ' ἐνταῦθα ἔπραξας οὐδὲν, ἀλλ' εἰς τινα καιρὸν ἀνεβάλλου καλλίω.

2. (*a*) Write short explanatory notes on the several references to the Athenian Constitution in ext. (A). *τὸ θεωρικόν*,—Grote calls this "The Church Fund":—explain. (*b*) Who were Eubulus and Hegemon? (*c*) Explain the historical references in ext. (B). (*d*) *κύριος εἶναι*,—why the *Nom.*? *τῆς δόξης ταύτης*,—what *Gen.*? (*e*) Ext. (C).—*ἀπειλημμένος*, —parse. *τῆς ἵππου*, — explain the *Gender*. *ἀηδίαν*, — derive. *τὰς ἐπιστολὰς ἃς ἐξηρτημένος κ. τ. λ.*,—construe and illustrate from the Latin. *χρυσοκέρων*,—explain.

3. Translate *Θαργηλιῶνος μηνὸς δευτέρᾳ φθίνοντος*, and explain, with examples, the Athenian mode of dating.

4. Explain briefly the following:—(1) *χειροτονία*. (2) *εἰσαγγελία*. (3) *οἱ πρυτάνεις*. (4) *οἱ πρόεδροι*. (5) *ἡ προεδρεύουσα φύλη*. (6) *ὁ νομοθέης*. (7) *ὁ ὑπεύθυνος*. (8) *οἱ θεσμοθέται*. (9) *οἱ πάραλοι*. (10) *οἱ ἱερομνήμονες*.

5. State (1) the grounds on which Æschines opposes Ctesiphon's motion to crown Demosthenes. (2) The date of the delivery of this oration. (3) The result of the trial.

6. Translate:—

(D) Κληδόνας τε δυσκρίτους
ἐγνώρισ' αὐτοῖς· ἐνοδίους τε συμβόλους
γαμψωνύχων τε πτῆσιν οἰωνῶν σκιθρῶς
διώρισ.' οἵτινές τε δεξιοὶ φύσιν
εὐωνύμους τε, καὶ δίαιταν ἥντινα
ἔχουσ' ἕκαστοι, καὶ πρὸς ἀλλήλους τίνες
ἔχθραι τε καὶ στέργηθρα καὶ ξυνεδρίαι·
σπλάγχνων τε λειότητα, καὶ χροιὰν τίνα
ἔχοντ' ἂν εἴη δαίμοσιν πρὸς ἡδονὴν,
χολῆς λοβοῦ τε ποικίλην εὐμορφίαν,
κνίσῃ τε κῶλα συγκαλυπτὰ καὶ μακρὰν
ὀσφῦν πυρώσας δυστέκμαρτον εἰς τέχνην
ὤδωσα θνητούς· καὶ φλογωπὰ σήματα
ἐξωμμάτωσα, πρόσθεν ὄντ' ἐπάργεμα.
τοιαῦτα μὲν δὴ ταῦτ'· ἐνερθε δὲ χθονὸς
κεκρυμμέν' ἀνθρώποισιν ὠφελήματα,
χαλκὸν, σίδηρον, ἄργυρον, χρυσόν τε τίς

φήσειεν ἂν πάροιθεν ἐξευρεῖν ἐμοῦ ;
οὐδεὶς, σάφ' οἶδα, μὴ μάτην φλῦσαι θέλων.
βραχεῖ δὲ μύθῳ πάντα συλλήβδην μάθε,
πᾶσαι τέχναι βροτοῖσιν ἐκ Προμηθέως.
(Ε ΠΡ. *καὶ μὴν ἔργῳ κοὐκ ἔτι μυθῳ*
χθὼν σεσάλευται·
βρυχία δ' ἠχὼ παραμυκᾶται
βροντῆς, ἕλικες δ' ἐκλάμπουσι
στεροπῆς ζάπυροι,
στρόμβοι δὲ κόνιν εἱλίσσουσι·
σκιρτᾷ δ' ἀνέμων πνεύματα πάντων
εἰς ἄλληλα
στάσιν ἀντίπνουν ἀποδεικνύμενα·
ξυντετάρακται δ' αἰθὴρ πόντῳ.
τοιάδ' ἐπ' ἐμοὶ ῥιπὴ διόθεν
τεύχουσα φόβον στείχει φανερῶς.

7. (*a*) In ext. (D).—Derive and explain the meaning of:—*μαντικῆς, ἐστοίχισα, σκεθρῶς, δεξιοί, εὐωνύμους, ἐνοδίους συμβόλους, ἐξωμμάτωσα, ἐπάργεμα, χαλκόν, συλλήβδην.* (*b*) Designate the metre, write down the scheme, and scan the first five vss. of ext. (E). Derive, *μήν, ἠχώ, ἕλικες, ξάπυροι, στρόμβοι.*

8. (*a*) Give the proximate date of this Drama, adducing internal evidence. (*b*) What political references are there supposed to be in it? (*c*) Name the other Dramas which, with this, were composed by Æschylus on the legend of Prometheus. (*d*) What meaning do you attach to the legend?

FIRST YEAR.

LATIN.—VIRGIL.—ÆNEID, BOOK VII.

WEDNESDAY, APRIL 4TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) Ille intra tecta vocari
Inperat et *solio* medius consedit *avito*.
Tectum augustum, ingens, centum sublime *columnis*,
Urbe fuit summa, Laurentis regia Pici,
Horrendum silvis et religione parentum.
Hic sceptra accipere et primos attollere fasces
Regibus omen erat ; hoc illis curia templum,

Hae *sacris* sedes *epulis ;* hic ariete caeso
Perpetuis soliti patres considere mensis.
Quin etiam veterum effigies ex ordine avorum
Antiqua e cedro, Italusque paterque Sabinus
Vitisator, curvam servans sub imagine falcem,
Saturnusque senex Ianique bifrontis imago,
Vestibulo adstabant, aliique ab origine reges,
Martiaque ob patriam *pugnando* volnera passi.
(B) Hic iuvenis, vatem inridens, sic orsa vicissim
Ore refert: *Classis invectas* Thybridis undam
Non, ut rere, meas effugit nuntius auris ;
Ne tantos mihi finge metus. Nec regia Iuno
Inmemor est *nostri ;*
Sed te victa situ verique effeta senectus,
O mater, curis nequiquam exercet, et arma
Regum inter falsa vatem formidine ludit.
Cura *tibi* divom effigies et templa tueri,
Bella viri pacemque gerant, *quis* bella gerenda.
(C) Illa vel intactae segetis per summa volaret
Gramina, nec teneras cursu laesisset aristas ;
Vel mare per medium fluctu suspensa tumenti
Ferret iter, celeris nec tingueret aequore plantas.
Illam omnis tectis agrisque effusa iuventus
Turbaque miratur matrum et prospectat euntem,
Attonitis inhians animis, ut regius ostro
Velet honos levis humeros, ut fibula crinem
Auro internectat, Lyciam ut gerat ipsa pharetram
Et pastoralem praefixa cuspide myrtum.

2. (*a*) Point out instances of *enallage* in the above extt. (*b*) Explain carefully the construction of the words in Italics. (*c*) Distinguish between the use of the Tenses in *volaret* and *laesisset* in ext. (C).

3. Scan andnme vs. 5 of ext. (B); and scan the last five vss. of ext. (A), carefully marking the feet and quantities.

4. Parse (giving the first Sing. Present, Perfect, and Future Indicative of each verb):—Pependit, obsedere, quierunt, vexit, marmore, velleribus, salvete, fefellit, afuit, haesit, laesisset, quievi.

5. Give the etymology and meaning of:—Vatis, examen, lymphata, arvina classis, tribus, gens, fata, arcana, trabes, tonsae, obscaenam. Note words in English either *cognate* with or *derived* from any of these.

6. (*a*) Decline:—Lepus, lepor, potus, unus, quis. (*b*) Write down the (1st sing.) *Imperf. Subjunct., Perf. Indic., Fut. Indic.*, with the supine of:—parēre, parēre, lavare, haurire. (*c*) State the fundamental distinction between the *Genitive* and *Ablative*, and name their leading uses.

7. Distinguish between :—*Urbs* and *civitas ; rex* and *tyrannus ; exercitus, acies*, and *agmen ; bellum* and *tumultus ; populus, plebs*, and *vulgus ; tristis* and *moestus ; hostis* and *inimicus ; pecus* (oris) and *pecus* (udis) ; plāga and plăga ; relēgat and relĕgat ; edūcet and edŭcet ; lūtea and lŭtea ; omnĭs and omnīs.

8. Turn into Latin :—1. Athens, the capital of Attica, was taken and destroyed by the Persians. 2. All the best soldiers were slain in battle. 3. Aristides, a citizen of Athens, 'was surnamed the Just. 4. Hercules and Bacchus are reported to have been kings of the East. 5. You may do this and it behoves you to do it. 6. The General on entering the town was struck on the head with a large stone and killed. 7. Cyrus and Darius were the most renowned kings of the Persians. 8. He was a citizen of very great liberality, and gave all his possessions for a free gift to the people.

INTERMEDIATE EXAMINATION.

WEDNESDAY, APRIL 4TH :—MORNING, 9 TO 12.

LATIN.—TACITUS.—GERMANIA AND AGRICOLA.

Examiners, ... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, LL.D.

1. Translate :—

(A) Celebrant carminibus antiquis, quod unum apud illos memoriæ et annalium genus est, Tuistonem deum terra editum et filium Mannum, originem gentis conditoresque. Manno tris filios adsignant, e quorum nominibus proximi Oceano Ingaevones, medii Herminones, ceteri Istaevones *vocentur*. quidam, ut in licentia vetustatis, pluris deo *ortos* plurisque gentis appellationes, Marsos Gambrivios Suebos Vandalios adfirmant, eaque vera et antiqua nomina. ceterum Germaniæ vocabulum recens et nuper *additum*, quoniam qui primi Rhenum transgressi Gallos expulerint, ut nunc Tungri, tunc Germani vocati sint : ita nationis nomen, non gentis, evaluisse paulatim, ut omnes primum a victore ob metum, mox etiam a se ipsis invento nomine Germani vocarentur.

(B) Nullas Germanorum *populis* urbes habitari satis notum est, ne pati quidem inter se iunctas sedes. colunt discreti ac diversi, ut fons, ut campus, ut nemus placuit. vicos locant non in nostrum morem connexis et cohaerentibus ædificiis : suam quisque domum spatio circumdat, sive adversus casus ignis *remedium* sive inscitia ædificandi. ne caementorum quidem apud illos aut tegularum usus : materia ad omnia utuntur informi et citra speciem aut delectationem. quædam loca diligentius inlinunt terra ita pura ac splendente, ut picturam ac liniamenta colorum imitetur. solent et subterraneos specus aperire eosque multo insuper fimo onerant, *suffugium* hiemi et receptaculum frugibus, quia rigorem frigorum eius modi locis

molliunt, et si quando hostis advenit, aperta populatur, abdita autem et defossa aut ignorantur aut eo ipso fallunt quod quaerenda sunt.

(C) Hinc ad capessendos magistratus in urbem digressus Domitiam Decidianam, splendidis natalibus ortam, sibi iunxit; idque matrimonium ad maiora nitenti decus ac robur fuit. vixeruntque mira concordia, per mutuam caritatem et in vicem se anteponendo, nisi quod in bona uxore tanto maior laus quanto in mala plus culpae est. sors quaesturae provinciam Asiam, pro consule Salvium Titianum dedit, quorum neutro corruptus est, quamquam et provincia dives ac parata peccantibus, et pro consule in omnem aviditatem pronus quantalibet facilitate redempturus esset mutuam dissimulationem mali. auctus est ibi filia, in subsidium simul et solacium; nam filium ante sublatum brevi amisit.

(D) Quinto expeditionum anno nave prima transgressus ignotas ad id tempus gentis crebris simul ac prosperis proeliis domuit; eamque partem Britanniae quae Hiberniam aspicit copiis instruxit, in spem magis quam ob formidinem, si quidem Hibernia medio inter Britanniam atque Hispaniam sita et Gallico quoque mari opportuna valentissimam imperii partem magnis in vicem usibus *miscuerit*. spatium eius, si Britanniae comparetur, angustius, nostri maris insulas superat. solum caelumque et ingenia cultusque hominum haud multum a Britannia differunt: * * melius aditus portusque per commercia et negotiatores cogniti. Agricola expulsum seditione domestica unum ex regulis gentis exceperat ac specie amicitiae in occasionem retinebat. saepe *ex eo* audivi legione una et modicis auxiliis debellari obtinerique Hiberniam posse; idque etiam adversus Britanniam profuturum, si Romana ubique arma et velut e conspectu libertas tolleretur.

2. (*a*) Explain the grammatical use of the words in Italics in the above extt. (*b*) In ext. (D), what interpretations have been given of *ex eo audivi?* (*c*) *nave prima*:—note the different interpretations.

3. Explain the use of the oblique cases in:—(*a*) Patiens *frugum*. (*b*) *admiratione* praesunt. (*c*) Expetuntur *legationibus*. (*d*) Aram *Ulixi* consecratum. (*e*) Monstratus *fatis* Vespasianus. (*f*) Abeunti concedere *moris*. (Note differences of interpretation of any.)

4. (1) Illustrate the following constructions from the Greek:—(*a*) Et quibus bellum volentibus. (*b*) Est videre argentea vasa. (*c*) In universum aestimanti. (2) The following various readings occur; translate according to each; and show which are, severally, to be preferred:—(*a*) *Septa—septæ* pudicitia agunt. (*b*) *Ludere—luere—vendere* pretio. (*c*) Secretum *ut—et—vel* silentium non timeres. (*d*) Vastatis usque ad *Tanaum—Taum*. (*e*) Ad montem *Graupium—Grampium*.

5. Parse the following:—invasere, texissent, ascivit, ortos, popularetur, infectos, satis, indecoris, secretum, lauti.

6. Explain:—(1) Nec *jurisdictio* obvenerat. (2) Filium ante *sublatum*. (3) Contractis legionum *vexillis*. (4) *Sinus famæ*. (5) *Cohors* immixti *manipulis*. (6) Infesta *hostilis exercitus* itinera.

7. (*a*) Write short explanatory notes, geographical, giving modern names where you can, on the following:—(1) Veteranorum colonia. (2) Monam insulam. (3) Brigantes, Silures. Ordovices. (4) Clota et Bodotria. (5) Orcadas. (6) Thyle. (7) Rubro mari. (8) Tanaum. (9) Adversus Oceanus. (*b*) What is meant by *Germania omnis*? (*c*) Give the different meanings that have been assigned to the name Germania. What is the etymology of it?

8. (*a*) State as exactly as you can the difference in meaning between:—Adventibus et hospitiis; memoriæ et annalium; honor aut gloria frontis; connexis et cohaerentibus; discreti ac diversi; infinita aut libera; laboris atque operum; scelera et flagitia; gens et natio; cassis aut galea; familiae et propinquitates; lucos ac nemora; quaestum aut mercedem.

9. An account of the life and writings of Tacitus. Point out grammatical and rhetorical peculiarities of his style.

THIRD YEAR.

LATIN.—PLAUTUS.—AULULARIA.

THURSDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) EU. Di te ament, Megadore. ME Quid tu? recten, atque ut vis vales?
EU. Non temerarium est, ubi dives blande adpellat pauperem:
iam illic homo aurum scit me habere: eo me salutat blandius.
ME. Ain tu te valere? EU. Pol ego haud perbene a pecunia.
ME. Pol si est animus aequos tibi, sat habes qui bene vitam colas.
EU. Anus hercle huic indicium fecit de auro; perspicue palamst;
quoi ego iam linguam praecidam atque oculos ecfodiam domi.
ME. Quid tu solus tecum loquere? EU. Meam pauperiem conqueror:
virginem habeo grandem, dote cassam atque inlocabilem:
neque eam queo locare quoiquam. ME. Tace; bonum habe animum Euclio;
dabitur: adiuvabere a me. Dic, si quid opust; impera.
EU. Nunc petit, quom pollicetur; inhiat aurum, ut devoret;
altera manu fert lapidem, panem ostentat altera.
Nemini credo, qui large blandust dives pauperi:
ubi manum iniicit benigne, ibi onerat aliquam zamiam.
Ego istos novi polypos, qui ubi quidquid tetigerunt tenent.

(B) Perii interii occidi! Quo curram? quo non curram? Tene, tene!—
Quem quis?—
Nescio: nil video: coecus eo atque equidem quo eam aut ubi sim aut qui sim,
nequeo cum animo certum investigare. Obsecro vos ego mi auxilio,
oro obtestor, sitis et hominem demonstretis, qui eam abstulerit.
Quid ais tu? Tibi credere certum est; nam esse bonum, e voltu cognosco.
Quid est quod ridetis? Novi omnis: scio fures esse hic compluris,
qui vestitu et creta occultant sese atque sedent, quasi sint frugi.
Hem, nemon habet horum?—Occidisti! Dic igitur quis eam habet. Nescis?
Heu me miserum! misere perii! male perditus pessume ornatus eo:
tantum gemiti et malae moestitiae hic dies mi obtulit et
famem et pauperiem. Perditus penissume sum ego omnium
in terra. Nam quid mihi opus est vita qui tantum auri perdidi,
quod custodivi sedulo? Egomet me defraudavi
animumque meum geniumque meum. Nunc meo alii laetificantur
damno et malo! Pati nequeo.

2. Write a short account of Plautus, and of the origin of Dramatic literature among the Romans.

3. Explain the construction of:—(*a*) Cave indicassis. (*b*) Nunc meo alii laetificantur damno et malo. (*c*) Ejus honoris gratia feci. (*d*) Discrucior animi. (*e*) Quid tibi meam tactio.

4. Explain the force of the prepositions in:—(1) Perbene a pecunia. (2) Apud nos. (3) Numos in viros. (4) Quod in rem tuam optumum. (5) Ex proxumo pauperculum. (6) Pro re nitorem. (7) Cum animo. (8) De industria.

5. Illustrate by such examples as you can give from this play the unsettled state of the language in respect of:—(1) Orthography. (2) Declension and conjugation; and (3) Grammatical construction.

6. Derive, and give the meaning of:—Pedisequa, edepol, mecastor, sucophantias, censione, curionem, propolae, ciniflones, temperi, cassam, zamiam, polypos, incolae, adcolae.

7. Write explanatory notes on:—(1) Cereris vigiliis. (2) Harpagatum est. (3) De suo tigillo fumus. (8) Cocus nundinalis. (5) Ita me bene Laverna amet. (6) Peculiaris. (7) Putatur ratio, disputata est ratio. (8) Foris crepuit. (9) Qui vestitu creta * * sedent. (10) Pici divitiis * * supero.

8. Parse, and give the ordinary forms of:—Med, sis, tuais, avom, scibas, impetrassere, mutassis, ausim, fuat, faxint, respexis, dixis. What were the original terminations of the Perf. Subj. and the Fut. Perf?

9. Translate into Latin :—

But Ascanius, the son of Æneas, who was also called Iulus, left the town of Lavinium after thirty years, and built a new city, high on the hill near a deep lake; and he called the town Alba Longa, and there he and his descendants reigned three hundred years over the whole country of the Latins from the mountains to the sea, and all the Latin towns were subject to Alba. There were thirty of them, and Alba was the chief town of the league, and upon the summit of the Alban hill they built a temple to Jupiter Latiaris, for thus King Latinus was called after his death when he had become a god. In this temple the thirty Latin towns offered an annual sacrifice and celebrated games in honour of the god. But the sacred relics of Troy, which Æneas had rescued, remained still in Lavinium, the first place in Latium where they were worshipped; and whenever they were carried away from it to Alba Longa, they returned of their own accord to Lavinium in the night.

B.A. ORDINARY EXAMINATION.

WEDNESDAY, APRIL 18TH :—MORNING, 9 TO 12

LATIN.— { TACITUS.—ANNALS, BOOK II.
JUVENAL.—SATIRES, VIII. AND X.

Examiners..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, LL.D.

1. Translate :—

(A) Eodem anno duodecim celebres Asiæ urbes collapsæ nocturno motu terræ : quo improvisior graviorque pestis fuit. Neque solitum in tali casu effugium subveniebat, in aperta prorumpendi, quia diductis terris hauriebantur. Sedisse immensos montes, visa in arduo quæ plana fuerint, effulsisse inter ruinam ignes memorant. Asperrima in Sardianos lues plurimum in eosdem misericordiæ traxit : nam centies sestertium pollicitus Cæsar, et quantum ærario aut fisco pendebant, in quinquennium remisit. Magnetes a Sipylo proximi damno ac remedio habiti. Temnios, Philadelphenos, Ægeatas, Apollonidienses, quique Mosteni aut Macedones Hyrcani vocantur, et Hierocæsaream, Myrinam, Cymen, Tmolum levari idem in tempus tributis, mittique ex senatu placuit qui præsentia spectaret refoveretque. Delectus est M. Aletus e prætoriis, ne consulari obtinente Asiam æmulatio inter pares et ex eo impedimentum oreretur.

(B) Igitur, quid agendum, consultanti M. Piso filius properandum in urbem censebat : nihil adhuc inexpiabile admissum, neque suspiciones inbecillas aut inania famæ pertimescenda. Discordiam erga Germanicum odio fortasse dignam, non pœna ; et ademptione provinciæ satisfactum inimicis. Quodsi regrederetur, obsistente Sentio civile bellum incipi ; nec duraturos

in partibus centuriones militesque, apud quos recens imperatoris sui memoria, et penitus infixus in Cæsares amor prævaleret. Contra Domitius Celer, ex intima ejus amicitia, disseruit, utendum eventu: Pisonem, non Sentium Syriæ præpositum; huic fasces et jus prætoris, huic legiones datas. Si quid hostile ingruat, quem justius arma oppositurum quam qui legati auctoritatem et propria mandata acceperit? Relinquendum etiam rumoribus tempus quo senescant: plerumque innocentes recenti invidiæ impares. At si teneat exercitum, augeat vires, multa, quæ provideri non possint, fortuito in melius casura. "An festinamus cum Germanici cineribus appellere, ut te inauditum et indefensum planctus Agrippinæ, ac vulgus imperitum, primo rumore rapiant? Est tibi Augustæ conscientia, est Cæsaris favor, sed in occulto; et perisse Germanicum nulli jactantius mærent, quam qui maxime lætantur."

(C) Miserum est aliorum incumbere famæ,
Ne collapsa ruant subductis tecta columnis.
Stratus humi palmes viduas desiderat ulmos.
Esto bonus miles, tutor bonus, arbiter idem
Integer; ambiguæ si quando citabere testis
Incertæque rei, Phalaris licet imperet, ut sis
Falsus, et admoto dictet perjuria tauro,
Summum crede nefas animam præferre pudori,
Et propter vitam vivendi perdere causas.
Dignus morte perit, cœnet licet ostrea centum
Gaurana et Cosmi toto mergatur aeno

Malo pater tibi sit Thersites, dummodo tu sis
Æacidæ similis Vulcaniaque arma capessas,
Quam te Thersitæ similem producat Achilles,
Et tamen, ut longe repetas longeque revolvas
Nomen, ab infami gentem deducis asylo.
Majorum primus quisquis fuit ille tuorum,
Aut pastor fuit aut illud quod dicere nolo.

(D) Expende Hannibalem; quot libras in duce summo
Invenies? hic est quem non capit Africa Mauro
Percussa Oceano Niloque admota tepenti,
Rursus ad Æthiopum populos altosque elephantos.
Additur imperiis Hispania: Pyrenæum
Transilit. Opposuit natura Alpemque nivemque:
Diducit scopulos et montem rumpit aceto.
Jam tenet Italiam: tamen ultra pergere tendit:
"Actum," inquit "nihil est, nisi Pœno milite portas
Frangimus et media vexillum pono Suburra."
O qualis facies et quali digna tabella,
Quum Gætula ducem portaret bellua luscum!
Exitus ergo quis est? O gloria! vincitur idem

Nempe et in exsilium præceps fugit, atque ibi magnus
Mirandusque cliens sedet ad prætoria regis,
Donec Bithyno libeat vigilare tyranno.
Finem animæ, quæ res humanas miscuit olim,
Non gladii, non saxa dabunt, nec tela; sed ille
Cannarum vindex et tanti sanguinis ultor,
Annulus.

2. (*a*) Explain the geographical references of ext. (A), giving modern names where you can. (*b*) Explain :—tutor, arbiter, Gaurana, Cosmi, Vulcania arma, asylo.

3. Write the Greek words for the following, and give briefly in English the meaning of each:--stemmata, generosum, cygnum, naulum, conchylia, acersecomes, cerdoni, phasma, syrma, pulpita, citharœdus.

4. Parse fully the following words from the foregoing extracts, giving: (1) the meaning of each word, (2) the principal parts of the verbs, (3) the derivation or composition of each word :—(1) Conlapsæ, (2) effugium, (3) prorumpendi, (4) sestertium (supply the ellipsis after centies), (5) pollicitus, (6) refoveret, (7) expende, (8) percussa, (9) transilit, (10) aceto, (11) pergere, (12) vexillum, (13) exitus, (14) exsilium, (15) præceps.

5. Explain the references in :—(*a*) Aceto. (*b*) Suburra. (*c*) Vincitur idem nempe ;—where? When? by whom? (*d*) Bithyno tyranno. (*e*) Annulus. (*f*) Pellæo juveni.

6. (*a*) Translate.—(1) Phraates *venerantium* officia ad Augustum verterat partemque prolis *firmandæ amicitiæ* miserat. (2) Meminissent mode *avaritiæ*, crudelitatis, superbiæ. (3) Exclamat *irent*, sequerentur Romanas aves, propria legionum numina. (4) Sed Germanicus nondum *comperto* profectionem incusari Nilo subvehebatur. (5) Si limen obsideretur, si effundendus spiritus sub oculis inimicorum foret, quid deinde miserrimæ conjugi, quid infantibus liberis *eventurum?* (6) At si teneat exercitum, augeat vires, multa, quæ provideri non possint, fortuito in melius *casura*. (*b*) Explain the construction or any other peculiarity of the words in Italics in the foregoing extracts. (*c*) Turn into direct narration, meminissent, sequerentur and extt. (5) and (6).

7. State, (1) What changes take place in converting in Latin *direct* narration into *indirect?* (2) In what case alone is the Indicative admissible in *indirect narration?*

8. State, in regard to Tacitus :—(*a*) the supposed time and place of his birth, (*b*) his profession and offices held by him, (*c*) the time embraced by his History and Annals, (*d*) his extant works, (*e*) your grounds for thinking that he is or is not impartial in his account of Germanicus, Tiberius, etc., in Book II. of the Annals, (*f*) the period of history embraced in Book II.

B.A. ORDINARY EXAMINATION.

WEDNESDAY, APRIL 18TH —AFTERNOON, 2 TO 4.

LATIN PROSE COMPOSITION.

Examiners,..... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, LL.D.

Translate into Latin :—

Marcus Livius, after returning from the Illyrian war, was accused of dividing the enemy's spoils unjustly, and was condemned by a sentence of the whole people,—a disgrace which he took so much amiss, that he not only retired into the country but also for upwards of eight years avoided all intercourse with men. At length he was prevailed on to return to the city, and was offered the Consulship. When all urged him to accept this office, he is said to have spoken thus: "If I am worthy of being raised to this honour, why were you so unjust as to condemn me? If, on the other hand, I was deservedly punished, do you think that I ought to be again entrusted with power?" The Senators bade him remember that it was the part of a good citizen to forget the injuries inflicted by a fickle people; and Livius was at length induced to become the colleague of Caius Claudius.

B. A. ORDINARY EXAMINATION.

MONDAY, APRIL 16TH :—AFTERNOON, 2 TO 4.

GREEK AND ROMAN HISTORY.

Examiners,..... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, LL.D.

1. Sketch the general results to Greece of the defeat of Athens in the Peloponnesian War.

2. What causes led to the Theban Supremacy?

3. Describe geographically, illustrating by a map if you can, the Chalcidic Peninsula, and point out its maritime and political importance and value.

4. Give an account of the events and pretexts which led to Philip's interference in the general affairs of Greece.

5. What was the constitution of the Achaean League? What states successively joined it?

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1. Give an account of the condition, socially and politically, of the Roman people at the time of the death of Julius Cæsar.

2. Give the dates of the accession and death of Augustus. Sketch the leading features of his public character and policy.

3. Name the emperors of the Julian and Flavian houses, respectively.

4. An account of the reign of Nerva.

INTERMEDIATE EXAMINATION.

THURSDAY, APRIL 5TH:—MORNING, 9 TO 12.

LATIN PROSE COMPOSITION.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, LL.D.

Translate into Latin either of the following extracts:—

(A) Titus Pomponius was born on the 9th of March, 109 years before the Christian era, and thus it is evident to those acquainted with the order of Roman events that he was three years older than his friend Cicero. Living at a time when he saw it was dangerous to be in Rome, he removed with the large fortune he had to Athens, where he acquired such skill in Greek, that he was not only acknowledged to write and speak it the most elegantly of any stranger, but was even preferred by some to the Athenians of his day, and was called Atticus, the name by which he is commonly known to us, who are sometimes content without knowing the whole. As a proof of his learning he wrote several works, all of which, it is deeply to be regretted, have perished; and what may appear strange, of his numerous letters to Cicero, not one is extant, though Cicero's have been preserved.

(B) Whilst the Senonian Gauls were besieging Clusium, a town of Etruria, three ambassadors were sent from Rome to warn the Gauls to desist from the siege. One of these, contrary to the law of nations, went forth to battle, and slew a chief of the Senones. Exasperated at this, the Gauls, after having in vain demanded the surrender of the ambassadors set out for Rome, and overthrew the Roman army at the river Allia. They entered the city as conquerors, where at first they reverenced, as though they were gods, the most noble of the old men, who were sitting in their curule chairs, and clothed with their insignia of magistrates; afterwards when they perceived them to be but men, they put them to death. The rest of the youth fled with Manlius into the Capitol, where they were besieged, but liberated by the valour of Camillus, who, being appointed Dictator in his absence, collected the citizens that still remained and overpowered the Gauls by an unexpected attack.

FIRST YEAR.

HISTORY.—HISTORY OF GREECE AND ROME.

THURSDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner,.. .....REV. GEORGE CORNISH, LL.D.

1. (*a*) By what names did the Greeks designate themselves and their country? Whence have come the common designations? (*b*) Name the countries of Central Greece, and the islands off the West coast of Greece. (*c*) Give the derivation and meaning of *Cyclades* and *Sporades*, and show their geographical position.

2. Narrate briefly the legend of Cadmus, and point out elements of probability in it. For what was Greece said to be indebted to him?

3. Mention the favourable and the unfavourable aspects of the life, social and political, of the Heroic age.

4. A short account of Greek colonization.

5. Give the substance of Dr. Smith's remarks on the objects and results of the legislation of Lycurgus.

6. An account of the Constitution of Cleisthenes, and of the development of Democracy at Athens.

7. Give an account of the Constitution of Servius Tullius.

8. What causes led to the struggles between the Patricians and the Plebeians? What were the general results of the contention?

9. How many years did Hannibal continue in Italy, and what signal defeats did he inflict upon the Romans?

10. What events are connected with the names of Lucius Junius Brutus, Spurius Cassius, Camillus, Coriolanus, Fabius Cunctator? Give dates.

B. A. EXAMINATION FOR HONOURS IN CLASSICS, 1883.

GREEK PROSE WRITERS.

TUESDAY, APRIL 24TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you deem it necessary :—

(A) Demosthenes, DeCorona, page 225 (Ed. Tauchnitz), Φιλίππῳ μὲν ἦν συμφέρον down to τοῦτ' ἐγράφη.

(B) Aeschines, Contra Ctesiphontem, §§ 152, 153 (Ed. Teubner), inclusive.

2. (*a*) Explain carefully the meaning of the following references in the above extt. :—(1) ἀκαλλιερήτων τῶν ἱερῶν. (2) τοῖς δραπέταις ποσί. (3) ἐγκωμιάζειν τὴν ἐκείνων ἀρετήν. (4) ἐν τῷ δικαστηρίῳ. (5) τὸ ψήφισμα. (6) βουλεύων. (7) θέαν μὴ κατανεῖμαι. (8) ἐν τοῖν δυοιν ὀβολοῖν. (9) γίνεσθε δή μοι τὴν διάνοιαν,—explain the use of the *Dat.* and *Acc.* here. (*b*) Give the days of the month, according to our mode of reckoning, indicated by the following :—ἕνῃ καὶ νέᾳ. δεκάτῃ ἀπίοντος. ἕκτῃ ἱσταμένου. τρίτῃ ἐπὶ δέκα. What is the meaning of the first, and why was it used? (*c*) Name the dates of the delivery of these orations, severally. What were the strong points in the indictment of Aeschines, and how did Desmothenes deal with them.

3. Translate :—

(C) Aristotle, De Poetica, chap. ix., §§ 1 to 6, inclusive.

4. (*a*) ἐπὶ τῆς κωμῳδίας,—to what periods of Greek Comedy may this be taken as referring? (*b*) Translate and illustrate § 14 of Chap. iv., giving the derivation of ἰαμβεῖον. (*c*) Account for the unsatisfactory condition of the text of this treatise, and mention the theories held touching the history of the text as we have it.

4. Translate :—

(D) Plato, De Republica, Book II., chap. xvii., §§ C to E, βουληθῇ γράψαι.

5. Translate :—

(E) Herodotus, Book VIII., chaps. xliii and xliv.

6. (*a*) Explain the geographical references of ext. (E). (*b*) Characterise the style of Herodotus, and contrast it with that of Thucydides. (*c*) Describe the dialect used by Herodotus, and point out forms peculiar to it in the above ext.

7. Translate :—
(F) Thucydides, Book VII., chap. xix.

8. (*a*) In ext. (F) explain the phrase *ἐν τοῖς πρῶτοι*. How far was Decelea from Athens? (*b*) Translate, and explain the syntax of the following passages in Book VII. :—(1) *ἐφθασαν παροικοδομήσαντες, καὶ παρελθόντες τὴν τῶν Ἀθηναίων οἰκοδομίαν, ὥστε μηκέτι μήτε αὐτοὶ κωλύεσθαι ὑπ' αὐτῶν*. (c. 6). (2) *ἢ τῷ ὄχλῳ πρὸς χάριν τι λέγοντες*. (c. 8). (3) *τοῖς τε γὰρ ἐπιχειρήμασιν ἑώρων οὐ κατορθοῦντες, καὶ τοὺς στρατιώτας ἀχθομένους τῇ μονῇ*. (c. 47). (4) *παύσαντες τὴν φλόγα, καὶ τὸ μὴ προσελθεῖν ἐγγὺς τὴν ὀλκάδα*. (c. 53). (5) *νομίζων οὐ τὸ ὑπομένειν ἐν τῷ τοιούτῳ ἑκόντας εἶναι, καὶ μάχεσθαι. σωτηρίαν*. (c. 81). (*c*) Distinguish between :—*Σικανοί*, *Σικελοί*, and *Σικελιῶται*,

9. Translate :—
(G) Xenophon, Hellenics, Book I., chap. iv., §§ 20–23 inclusive.

10. In chap. 4. :—(*a*) *κάρανον* (§ 3),—derive and give its cognates. (*b*) (§ 11), *τοῦ οἰκαδε * * * ἔχει*,—show the construction. (*c*) (§ 12), *Πλυντήρια * * τῆς Ἀθηνᾶς*,—translate and explain. (*d*) (§ 13), *τὸν Ἀλκιβ.*, why the article here?

GREEK POETS.

TUESDAY, APRIL 10th:—MORNING, 9 TO 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate, with an explanatory note when you deem it necessary :—
(A) Aeschylus, Prometheus Viuctus vss 887–906.

2. (*a*) Give the proverb and the name of its inventor to which reference is made in ext. (A). (*b*) *ἄπορα πόριμος*, what figure of rhetoric? Cite other instances from this drama. What case is *ἄπορα*, and why? (*c*) Parse the following words, giving the Attic equivalents for such as are non-Attic :—*προσδράκοι*, *πλαθείην*, *ἀνωγε*, *δάπεδα*, *ἤξας*, *ἰότατι*, *προυσελούμενον*, *ἀσυένῳ*

3. Translate :—
(B) Aeschylus, Seven against Thebes, vss. 245–263.

4. (*a*) Comment on the meaning of:—Ἐλεδεμνάς, πύλαις ἑβδόμαις, Λύκειος, ὠγυγίαν, καπηλεύσειν μάχην, ξηροῖς ἀκλαύτοις ὄμμασιν, Ἑβδομαγέτης. (*b*) In what repute was this play held by the ancients?

5. Translate:—
(C) Sophocles, Antigone, vss. 352–381.

6. (*a*) Analyse the metres and scan the strophe in ext. (*c*). (*b*) Set forth briefly the subjects of the several *Stasima* in the Antigone and show how they are connected with each other, and how they illustrate Sophocles' use of the Chorus as compared with Euripides'. (*c*) ἀστυνόμους ὀργάς,—give different interpretations. Ἄιδα, νόσων, τέχνας θεῶν, Οἰδιπόδα,—show the construction. (*e*) παραίρων (366),—cite various readings and translate them.

7. Translate:—
(D) Euripides, Hippolytus, vss. 241–266

In vs. 248, how is the participle μαινόμενον used? 249. κρατεῖ,—to what is this equivalent? μηδὲν ἄγαν,—whence the proverb?

8. Translate:—
(E) Aristophanes, The Frogs, vss. (*a*) 131–142, and (*b*) 1182–1196

9. (*a*) Whence is vs. 1182 taken? (*b*) What is the point of the reference in vs. 1196? (*c*) τὼ δύ' ὀβολώ,—explain the allusion. (*d*) what were the grounds of Aristophanes' ridicule of Euripides. (*e*) Into what parts was the *Parabasis* divided, and what ones have we in this play?

10. Translate:—
(F) Pindar, Olympia, X. (XI.)

(*a*) ἀρχαὶ τέλλεται:—Explain this construction. (*b*) Write a short note on the style and dialect of Pindar, and illustrate from the above ext.

11. Translate:—
(G) Theocritus, Idyl, IV., vss. 1–22.

12. (*a*) Give Attic for the Doric forms in the above ext. (*b*) Explain and give examples of the *Bucolic Caesura*. (*c*) Give a short account of Theocritus.

13. Translate:—
(H) Hesiod, Works and Days, vss. 223–235.

14. Parse and derive the following words:—τέθηλε, μεμηλότα, ζείδωρος, πόποι, Δᾶν, ψέ, πρόσπλατοι, μόλης, ἐτάθη, ἀνήμεροι.

15. Translate :—

(I) Οἶει σὺ τοὺς θανόντας, ὦ Νικήρατε,
Τρυφῆς ἀπάσης μεταλαβόντας ἐν βίῳ
Πεφευγέναι τὸ Θεῖόν ὡς λεληθότας ;
Ἔστιν Δίκης ὀφθαλμὸς, ὃς τὰ πάνθ' ὁρᾷ.
Καὶ γὰρ καθ' ἕδην δύο τρίβους νομίζομεν,
Μίαν δικαίων, χἀτέραν ἀσεβῶν ὁδόν.
Εἰ γὰρ δίκαιος κἀσεθὴς ἐξουσιν ἓν,
Ἡ γῆ δέ καλύψει τοὺς δύο τῷ παντὶ χρόνῳ,
Ἅρπαζ' ἀπελθὼν, κλέπτ', ἀποστέρει, κύκα.
Μηδὲν πλανηθῆς· ἔστι κἄν ἅδου κρίσις,
Ὑπὲρ ποιήσει Θεὸς ὁ πάντων δεσπότης,
Οὔ τ' ὄνομα φοβερὸν, οὐδ' ἂν ὀνομάσαιμ' ἐγώ,
Ὃς τοῖς ἁμαρτάνουσι πρὸς μῆκος βίον
Δίδωσι. *Philemon.*

LATIN PROSE WRITERS.

TUESDAY, APRIL 17TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate the following extracts into English, adding a brief comment where any peculiar form or construction seems to you to require it :—
(A) Livy, Book XXII., chap. 2.

2. (*a*) Construe "placandis Romae dis habendoque dilectu," and note any peculiarity of case-formation. (*b*) "Ipse aeger oculis, etc. :"—cite Juvenal on this passage. (*c*) Give the date of the events with which book XXII. opens, and a short account of the events preceding it. (*d*) Write explanatory notes on the following :—(1) Quum de republica retulisset. (2) Mavors. (3) Per principes ; antesignani. (4) Fatalibus libris. (5) Duellis, clepsit, faxitur. (6) Aetas militaris. (7) Prorogato imperio. (8) In sententiam pedibus issent. (9) Praerogativam militarem. (10) Ver novum.

3. Translate :—
(B) Tacitus, Annals, Book I., chap. 72.

4. (*a*) *Triumphalia insignia*,—what were these ? What were the conditions for receiving a *justus triumphus* in the time of the Republic ? (*b*) *In acta sua jurari*,—explain. (*c*) *Legem majestatis*,—explain what offences it comprehended under (1) the Republic, (2) under Tiberius.

5. Translate the following extracts, adding an explanatory note, grammatical or otherwise, where you deem it to be needed :—(*a*) Mederetur

fessis, neu mortem in isdem laboribus, sed finem tam exercitae militiae neque inopem requiem orabant. (*b*) Pergere ad Treviros et externae fidei. (*c*) Segestes discors manebat, auctis privatim odiis, quod Arminius filiam ejus alii pactam rapuerat, gener invisus inimici soceri. (*d*) Accendebat haec Sejanus, peritia morum Tiberii odia in longum jaciens, quae reconderet auctaque promeret.

6. Translate :—

(C) Tacitus, Histories, Book I., chap. 49.

7. (*a*) Derive and explain the meaning of :—Dispensator, lixas calones, libertus, venditator, obtentui. (*b*) *Quinque principes*,—name them, giving dates. (*c*) Mention, with examples, any peculiarities of the styles of Livy and Tacitus. Which is to be regarded as the more trustworthy historian? Give your reasons. (*d*) What are the distinguishing characteristics in the matter of style, literary finish, and treatment of materials, of the Annals and Histories. (*e*) Comment on the following uses of the subjunctive in this Book I. :—(*a*) Alium *crederes* senatum. (*b*) Postquam · · *nequiverint* (chap. 7). (*c*) Ne · · · *fueris* (16). (*d*) *Perdidissent* (18). (*e*) Quis · · · *processerim* (37). (*f*) Neque · · · *crediderim*.

8. Translate :—

(D) Cicero, De Imp. Cn. Pomp., chap. XX. :—"Etenim talis vir" to end.

9. (*a*) Narrate the date, object, and result of the delivery of this oration. By what other name is it designated? (*b*) Explain the following :—(1) Ex portu, ex decumis, ex scriptura vectigal. (2) Jus legationis. (3) Socius populi Romani. (4) Duo reges imminent toti Asiæ. (5) Cum Antiocho, cum Philippo, cum Aetolis bella gesserunt. (*c*) How had the *Equites* come to occupy so important a position, politically and socially, as that they held in the time of Cicero? What was his policy in regard to them and why? What class, or classes, in our modern political and social life would you regard as their representatives?

10. Translate :—

(E) Cicero, De Officiis, Book III., chap. 2, §§ 5 and 6.

11. (*a*) Characterise Cicero as a philosopher. (*b*) What systems of philosophy did he follow at different periods of his life? (*c*) Define the main object and scope of the De Officiis.

12. Translate :—

(F) Erat Miseni classemque imperio praesens regebat. Nonum Kal. Septembres hora fere septima mater mea indicat ei apparere nubem inusitata et magnitudine et specie. Usus ille sole, mox frigida, gustaverat iacens studebatque : poscit soleas, ascendit locum ex quo maxime miraculum illud conspici poterat. Nubes, incertum procul intuentibus ex quo lmonte (Vesuvium fuisse postea cognitum est), oriebatur, cuius similitudi-

nem et formam non alia magis arbor quam pinus expresserit. Nam longissimo velut trunco elata in altum quibusdam ramis diffundebatur, credo, quia recenti spiritu evecta, dein senescente eo destituta aut etiam pondere suo victa in latitudinem vanescebat: candida interdum, interdum sordida et maculosa, prout terram cineremve sustulerat. Magnum propiusque noscendum, ut eruditissimo viro, visum. Iubet liburnicam aptari: mihi, si venire una vellem, facit copiam: respondi studere me malle, et forte ipse quod scriberem dederat. Egrediebatur domo: accipit codicillos Rectinae Tasci inminenti periculo exterritae (nam villa eius subiacebat, nec ulla nisi navibus fuga): ut se tanto discrimini eriperet orabat.—*Pliny.*

LATIN POETS.

TUESDAY, APRIL 3RD:—MORNING, 9 TO 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate (adding an explanatory note where you may deem it necessary on any peculiar form or construction in any of the extt.):—
(A) Horace, Satires, Book I., Sat. vii., vss. 1-21.

2. (*a*) Explain what was the subject of this satire, and on what grounds a high place has been assigned to it by some. (*b*) Explain the meaning of the following:—(1) *Ut equis* praecurreret *albis*. (2) Omni *conventu*. (3) *Magna* compellans *voce cucullum*. (4) Serpens *Epidaurius*. (5) Cum *tristes* venere *Kalendae*. (6) *Altius* ac nos *praecinctis* unum. (7) *ad unguem* factus homo. (8) *Parochi* quae debent ligna salemque.

3. Translate:—
(B) Juvenal, Sat. viii., vss. 39-55; and (C) Sat. x., vss. 250-264.

4. Explain carefully the import of the following from the above ext.:—(1) *Tamquam* feceris. (2) *ut* te conciperet. (3) *nobilis* indocti. (4) *Juvenis*. (5) *Trunco* Hermæ. (6) *ut primos*—inciperet. (*b*) Explain also the following extt. from Sat. x.:—(1) Pluma Sardanapali. (2) Ritu decies centena dabuntur antiquo. (3) Non nisi legitime vult nubere. (4) Usque ad delicias votorum. (5) Animam exhalasset opimam. (6) Mandidis Sostratusalis.

5. Translate:—
(D) Persius, Sat. vi., vss. 1-15.

6. (*a*) Give the etymology and meaning of the following words:—bruma, tetrico, uncto, vapida, varo, genio, olus, mergis, exossatus, artocreas. (*b*) Comment on the meaning of the following from Sat. v.:—(1) Curto, centusse. (2) Varicosos centuriones. (3) Herodis dies. (4) Verte aliquid. (5) Lubrica Coa. (6) Sub sole recenti. (*c*) Derive and give the exact meaning of the term *Satira*.

7. Translate :—

(E) Plautus, Aulularia, Act iv., sc. 3, vss. 15-30. (G) Terence, Adelphi, Act v., sc. 1.

8. (*a*) Comment on the formation of the following words from Plautus and Terence :—Syrisce, sis, dis, scibo, villi, materfamilias, bellissimum, patrissas, faxo, quin, duim, fide. (*b*) Translate and explain :—(1) Vestitu et creta. (2) Ille rex Philippus. (3) Juno Lucina. (4) Novi sucophantias. (5) Artem facere ludicram. (6) Liberali illam assero causa manu. (7) Rationes puto. (8) Iujeci scrupulum homini. (9) Silicernium. (10) Restim ductans saltabis. (*c*) Write down the name and scheme of the metre of ext. (E).

9. Translate :—(F).

Tristior Haemoniis miles dīgressus ab oris
Tangebat Macetum fines, murosque subibat,
Thessalonica, tuos-Sensu dolor haerat in alto
Abditus, et tacitas vindictæ præstruit iras:
Spectaturque favens odiis locus, aptaque leto
Tempora: nec quisquam tanta de plebe repertus,
Proderet incantis qui corda minantia verbis.
Quae non posteritas, quae non mirabitur aetas
Tanti consiluim vulgi potuisse taceri,
Aut facinus tam grande tegi? mentisque calorem
Non sermone viae, non inter pocula rumpi?
Aequalis tantam tenuit constantia turbam:
Et fuit arcanum populo. Percurritur Hebrus
Deseritur Rhodope, Thracumque per ardua tendunt,
Donec ad Herculei perventum nominis urbem.

Claudian.

GREEK PROSE COMPOSITION.

Tuesday, April 24th :—Afternoon, 2 to 5.

Examiner,..... Rev. George Cornish, LL.D.

Translate into Greek:—

My father Cephalus was induced by Pericles to come to this country, and he lived here thirty years; and neither we nor he at any time either prosecuted any man at law or were prosecuted; but we lived so modestly under the popular Government as neither to trespass against others nor to be wronged by others. But when the Thirty, profligates and false accusers as they were, entered on the government they alleged that it was requisite

to purify the state from the wicked, and that the rest of the citizens should devote themselves to virtue and justice. But, though they spoke thus, they did not venture to act thus; as I, after first speaking of my own affairs, will endeavor to convince you in reference to yours. For Theognis and Peison declared before the Thirty, with regard to the resident-aliens, that there were certain persons disaffected to the constitution :—that this would be an excellent opportunity to seem to punish them, but in reality to get money. They readily persuaded their hearers, for they thought nothing of murdering men, but made a great point of getting money.

LATIN PROSE COMPOSITION.

TUESDAY, APRIL 3rd :—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

Translate into Latin :—

(A) Chremylus, who was an old and a good man, and withal exceeding poor, being desirous to leave some riches to his son, consulted the oracle of Apollo on the subject. The oracle bade him follow the first man he should see upon his going out of the temple. The person he chanced to see was, to all appearance, an old sordid blind man; but, upon his following him from place to place, he at last found, by his own confession, that he was Plutus, the god of riches, and that he was just come out of the house of a miser. Plutus further told him, that when he was a boy, he used to declare, that so soon as he was of age, he would distribute wealth to none but virtuous and just men; upon which Jupiter, considering the pernicious consequences of such a resolution, took his sight away from him, and left him to stroll about the world in the blind condition wherein Chremylus beheld him. With much ado, Chremylus prevailed upon him to go to his house, where he met an old woman in a tattered raiment, who had been his guest for many years, and whose name was Poverty. The old woman refusing to turn out so easily as he would have her, he threatened to banish her not only from his own house, but out of all Greece, if she made any more words upon the matter.

(B) There was a citizen of Lanuvium, named L. Thorius Balbus; before your time. In his habits of life he exhausted the most exquisite pleasures the imagination can devise. He was not only fond of luxury, but was a refined and versatile patron of all its branches; free from superstition, inasmuch as he despised the sacrifices and temples so numerous in his birth-place; fearless of death, inasmuch as he died on the battle-field in his country's cause. His pleasures were not bounded by the limitations of Epicurus, but by his own satiety. Nevertheless, he was careful of his health; he practised these exercises which secured him an appetite at dinner; his fare was at once the most delicious and the easiest of digestion;

wine he used alike for luxury and for health. Nor did he neglect those other pleasures, in the absence whereof Epicurus declares he cannot understand how anything can be good. Pain of every kind was a stranger to him; though had it assailed him he would have borne it with courage. He had a fine complexion, excellent health, courteous manners: in one word, a life teeming with pleasures of every description. Now, your principles argue Thorius a happy man.

GENERAL PAPER.

TUESDAY, APRIL 10TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. What was the original seat of the Aryan race? Name the principal languages of the Aryan family. How is Sanscrit related to Greek and Latin? With what Greek dialect is Latin most closely connected?

2. Explain gramatically the use of the accusative several in :—(*a*) *μέγιστα τιμηθῆναι*. (*b*) *ταὐτὰ σπεύδειν*. (*c*) *ἀλγῶ τὴν κεφαλήν*. (*d*) *νοσεῖν ὀφαλμούς*. (*e*) *ἐπιτετραμμένοι τὴν φυλακήν*.

3. *Οὐκ αὐτος ἔφη ἀλλ' ἐκεῖνον στρατηγεῖν*.—Translate this, and account for the difference of the cases. How would the sentence be expressed in Latin

4. Give examples of the verbal adjective in Greek. To what does it correspond in Latin? Express by different constructions,—'I must do these things,' employing the verbal in each.

5. Mention the Greek particles which express:—(1) Emphasis. (2) Irony. (3) Astonishment.

6. (*a*) What reasons are there for believing an additional case, viz., the *Locative*, to have existed in Greek and Latin? (*b*) What traces of the *Dual* number in Latin?

7. Point out and illustrate what is peculiar in the use of the Infinitive in the following quotations, severally:—(*a*) Pecus egit altos visere montes. (*b*) Fruges consumere nati. (*c*) Quis sibi res gestas Augusti scribere sumit? (*d*) Nil scire tuum est, nisi te scire hoc sciat alter.

8. Compare Æschylus, Sophocles, and Euripides as to :—(1) Their general style. (2) The use of the Chorus. (3) The Prologue. (4) Compare them also as to their views on religion, politics, and philosophy

9. Distinguish the Old, the Middle, and the New Comedy, naming some of the principal writers in each.

10. (*a*) A short account of the Roman Comic and Satiric poets. (*b*) Explain the following literary terms:—Fescenninæ, Saturæ, Mimæ, Atellanæ, Palliatæ, Togatæ, Contaminatio.

HISTORY OF GREECE AND ROME.

TUESDAY, APRIL 17TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Give the Latin equivalents in use among the Romans of the following names of Greek deities:—Zeus, Here, Poseidon, Athene, Eos, Hestia, Leto, Demeter, Hades, Ares.

2. A summary of the legislative reforms of:—(1) Lycurgus, (2) Solon, and (3) Cleisthenes.

3. With what foreign nations in Asia Minor and elsewhere did Greece come into contact, and how was early Grecian civilization thereby influenced?

4. The causes of the failure of the Persian expeditions against Greece. By what policy did Persia seek to establish an ascendancy in Grecian affairs?

5. The period of the supremacy of Athens; her policy and relations with other States; the sources of her strength and weakness; and the causes of her downfall.

6. How does Mommson, by a comparison of words common to Greek and Latin, determine the character of the civilization of the Greco-Italians before their separation?

7. Write an account of Sp. Cassius; and give the substance of what Arnold, following Niebuhr, says of the true character and objects of the Agrarian Laws.

8. When did Pyrrhus invade Italy, and under what pretext? In what part of Italy did he wage war with the Romans, and what was the result of the war?

9. To what family of the human race did the Carthaginians belong? Give a general account of the national characteristics and political institutions of the Carthaginians. In what ways do you suppose the position

and interests of civilized nations in Western Europe would have been affected if Carthage had conquered Rome?

10. Give an account of the state of political parties at Rome after the death of Sulla, and trace the steps which led to the establishment of what Mommson calls "The Military Monarchy"

11. Give Mommson's estimate of the character and policy of Julius Cæsar.

12. The causes of degeneracy in the political and social life of Rome toward the end of the Republic.

ORDINARY MATHEMATICS AND NATURAL PHILOSOPHY.

FIRST YEAR.

EUCLID—ARITHMETIC.

FRIDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
G. H. CHANDLER, M.A.

A

1. Two triangles, equi-angular to one another, are given; what theorem and what problem in the 6th Bk. would be used in finding two lines whose ratio shall be the same as the ratio of the areas of the triangles?

2. If a right line be drawn parallel to the base of a triangle, it divides the sides into proportional segments, the homologous segments being on the same side of the line.

3. If, from the point of contact of a tangent to a circle, a straight line be drawn cutting the circle, the angles it makes with the tangent are equal to the angles in the alternate segments of the circle.

(*a*). If two circles touch each other, any straight line drawn through the point of contact will cut off similar segments.

4. If a right line be cut into two equal and also into two unequal parts, the rectangle under the unequal parts, together with the square of the intermediate part, is equal to the square of half the line.

(*a*). Divide a line into two parts, such that the rectangle under them shall be the greatest possible.

5. Find the radius of a sphere the area of whose surface is one square foot, the area of a sphere being $4 \pi r^2$.

6. Find a fourth proportional to $\frac{3}{4}$, 1.05 and .006.

B

7. If a parallelogram and a triangle be on the same base and between the same parallels, the parallelogram shall be double of the triangle.

8. If from a point without a circle two straight lines be drawn, one of which cuts the circle and the other touches it; the rectangle contained by the whole line which cuts the circle and the part of it without the circle, shall be equal to the square on the line which touches it.

9. Inscribe a circle in a given triangle.

(*a*). Describe a circle which shall touch one side of a triangle and the two other sides produced.

10. The rectangle contained by the diagonals of a quadrilateral figure inscribed in a circle is equal to the sum of the rectangles contained by its opposite sides.

11. Find the areas of the square and regular hexagon inscribed in a circle of 2 inches radius.

12. Calculate the interest on \$68.70 for 3 yrs. 4 mos. 27 days, at 6 per cent.

FIRST YEAR.

TRIGONOMETRY—ALGEBRA.

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiners, ... { ALEXANDER JOHNSON, LL.D.
G. H. CHANDLER, M. A.

A.

1. Define the two units of angular measurement commonly employed, and find the ratio of the greater to the less.

a. If a right angle were taken as the unit, find the numerical expression for either of the two angles above mentioned.

2. Find the sines and cosines of the angles whose tangents are 3 and a respectively.

3. The sides of a triangle are 3, 4, and 5; prove that it is right-angled, and calculate the angles.

4. The cosine of an angle is equal to the cosine of its supplement but with an opposite sign.

5. Solve the equations :

$$a+x-\sqrt{2ax+x^2}=b$$
$$\frac{6x+13}{15}-\frac{3x+5}{5x-25}=\frac{2x}{5}$$

6. Divide 150 into two parts, such that if one be divided by 23 and the other by 27, the sum of the two quotients may be 6.

7. Reduce $\frac{x^2-4x+3}{x^2-2x-3}$ to its lowest terms.

B.

8. Write down the expansion of $(1+2x-3x^2+4x^3)^2$, and resolve $x^2+2x-15$, $12x^2-x-1$, and $6x^2+5x-4$ into elementary factors.

9. Solve the equations :

$$\left.\begin{aligned} ax+by&=c^2\\ \frac{a}{b+y}-\frac{b}{a+x}&=0 \end{aligned}\right\},\quad \left.\begin{aligned} xy&=x+y\\ xz&=2\,(x+z)\\ yz&=3\,(y+z) \end{aligned}\right\}.$$

10. Simplify the surds $\sqrt{45}$, $\sqrt[3]{135}$, $3\sqrt[4]{\frac{2}{3}}$; and show that the surds $3\sqrt{75}$, $\frac{2}{3}\sqrt{\frac{4}{75}}$, and $(144)^{-\frac{1}{4}}$ are similar.

11. Define the sine, cosine, and tangent of an angle, and trace the changes in the magnitude and sign of the tangent as the angle increases from 0° to 360°.

12. Prove the relations

$$\sec A-\tan A\sin A=\cos A,$$
$$\cot^2 A-\cos^2 A=\cot^2 A.\cos^2 A,$$
$$(\operatorname{cosec} A-\cot A)^2=\frac{1-\cos A}{1+\cos A}.$$

13. Prove that

$$\sin(A+B)=\sin A\cos B+\cos A\sin B,$$
$$\sin A=2\sin\frac{A}{2}\cos\frac{A}{2}$$
$$1\pm\sin A+\left(\cos\frac{A}{2}\pm\sin\frac{A}{2}\right)^2.$$

INTERMEDIATE EXAMINATION.

EUCLID—ARITHMETIC.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
REV. A. N. MCQUARRIE, B.A.

A.

1. Find a fourth proportional to three given right lines.

2. If four right lines be proportional, the rectangle under the extremes is equal to the rectangle under the means.

a. Prove Ptolemy's theorem, that if a quadrilateral be inscribed in a circle, the rectangle under the diagonals is equal to the sum of the rectangles under the opposite sides.

3. Inscribe a square in a given circle.

4. If the diameter of a circle and a chord intersect inside the circle, the rectangles under their segments are equal.

5. Convert the circulating decimal $.345\dot{6}\dot{5}6$ into a vulgar fraction.

6. If the Moon goes round the Earth in a circle in 27 days, 7 hours, 43 minutes, the distance between the centres of the Moon and Earth being 240,000 miles, find how many miles she travels in an hour.

7. Reduce 27 days, 7 hours and 43 minutes to the decimal of a year.

B.

8. If a right line be divided into any two parts, the squares of the whole line and of one of the parts are equal to twice the rectangle contained by the whole and that part, together with the square on the other part.

9. In a circle, the angle in a semicircle is a right angle; the angle in a segment greater than a semicircle is less than a right angle; and the angle in a segment less than a semicircle is greater than a right angle.

10. Describe a rectilineal figure which shall be similar to one, and equal to another rectilineal figure.

11. Give a rule for extracting the square root, and apply it in the following example:

Find the square root of $5\frac{1}{7}$ to four places of decimals.

12. The distance between the lower ends of two equal rafters in the different sides of a roof is 32 feet; and the height of the ridge above the foot of the rafters is 12 feet. What is the length of a rafter?

13. Find the time in which $270 will give $87 interest at 7 per cent.

INTERMEDIATE EXAMINATION.

TRIGONOMETRY—ALGEBRA.

THURSDAY, APRIL 12TH :—MORNING, 9 TO 12.

Examiners, ... { ALEXANDER JOHNSON, LL.D. / REV. A. N. MCQUARRIE, B.A.

A.

1. Define the circular measure of an angle; and find the circular measure of 60°.

2. The sides of any triangle are in the same ratio as the sines of the opposite angles.

3. A straight line AB, 500 yards long, was measured on one side of a river, and the angles A and B at its extremities contained by it and lines drawn to a church on the other side of the river were $A=79°\ 23'$ and $B=54°\ 22'$, calculate the distance of the church from the extremity A.

4. The sides of a right-angled triangle are 360 and 270 yards long respectively, find the angles.

5. Define logarithm; prove that the logarithm of the product of two numbers is the sum of their logarithms.

6. Simplify $\dfrac{\frac{a+x}{a-x}+\frac{a-x}{a+x}}{\frac{a+x}{a-x}-\frac{a-x}{a+x}}$

7. Find the values of G and N in the two following equations, the other letters representing known numbers:

$$\frac{G}{g}+\frac{Q}{q}=\frac{N}{n}$$
$$G+Q=N$$

8. Find the value of x from

$$\frac{x+4}{3x+5}+1\tfrac{1}{6}=\frac{3x+8}{2x+3}$$

9. Resolve $4x^2+8x+3$ into elementary factors.

10. Find the *sine, cosine, tangent, &c.*, of 60°

11. Prove that $tan\ 3a.=\dfrac{3tan\ A-tan^3A}{1-3tan^2A}$

12. Show that $1+\cos A=\frac{(a+b+c)\ (b+c-a)}{2bc}$

13. Solve the equations $\frac{132x+1}{3x+1}+\frac{8x+5}{x-1}=52$

$$\frac{3x^2-27}{x^2+3}+\frac{90+4x^2}{x^2+9}=7$$

14. What is the first hour after 6 o'clock at which the two hands of a watch are (1) directly opposite, and (2) at right angles to each other?

15. A detachment from an army was marching in regular column, with 5 men more in depth than in front; but on the enemy coming in sight, the front was increased by 845 men, and the whole was thus drawn up in 5 lines; find the number of men.

THIRD YEAR.

DESCRIPTIVE ASTRONOMY—OPTICS.

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Supposing a person at Montreal at noon to-day standing with his back to the Sun to be raised vertically in the air, and held suspended in space, while the Earth continued rotating beneath him, name in their proper order, the regions of the Earth which would successively present themselves to him.

2. In the case supposed the Earth would really pass away from beneath him; in what direction would it pass? What would be the appearances subsequently presented? How do we know this?

3. What is the shape of the shadow of the Earth? In what way would the existence of this shadow be noticeable by the spectator in space? When are we in it?

4. When an eclipse of the Moon takes place which side of the Moon gets first darkened?

5. Explain the phases of the Moon.

6. Describe by reference to the directions of Sherbrooke st. and McGill College avenue the positions of the following constellations, giving the altitudes roughly at some hour named, on one of the evenings of the past week: Orion, Cassiopeia, Ursa Major. Where are the Pleiades?

7. State and account for the phenomena of the November meteors.

8. Prove the formula connecting the distances of a luminous point and its conjugate focus from a concave mirror.

$$\frac{1}{d}+\frac{1}{D}=\frac{2}{r}$$

9. State the laws of refraction of light, and describe an experimental illustration of them.

10. Find the angle of total reflexion of water, the index of refraction being $\frac{3}{4}$.

11. A transparent picture 2 inches in diameter is placed in a magic lantern, the image on the screen is found to be 8 feet in diameter, the distance of the screen from the lens being 30 feet, find the focal length of the lens.

12. Explain the general principle on which Telescopes are constructed, and describe the Astronomical Telescope.

THIRD YEAR.

MECHANICS—HYDROSTATICS.

THURSDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Prove that the resultant of two forces P and Q acting on the same point of a body, and making with each other an angle ϕ is given by the equation:

$$R^2=P^2+Q^2+2PQ\ Cos\ \phi$$

2. What force will be required to work the handle of a windlass, the resistance to be overcome being 1156 lbs., the radius of the axle being 6 inches, and of the handle 2 ft. 8 inches?

3. In the Inclined Plane, if the Power be parallel to the length of the plane, prove that the Power is to the Resistance as the height of the plane to its length.

4. The arms of a false balance are to one another as 7 to 8, and the weight is put into one scale as often as into the other; what will be the gain or loss per cwt. to the seller?

5. State Newton's Laws of Motion, and illustrate them.

6. A horse drawing a waggon at the rate of 2 miles an hour, exerts a traction of 154 lbs.; what is the work done per minute?

7. If a body acted on by a constant force move through 5 feet in 3 seconds, find the magnitude of the force.

8. If a cubical vessel be filled with liquid; find the ratio of the pressures against the bottom and one of the sides.

9. Describe any experiment showing the elasticity of gases.

10. State Dalton and Gay-Lussac's law and prove

$$V^1 = V\frac{460+t'}{460+t}$$

11. State and prove the principle of Archimedes for floating bodies.

12. Describe the construction and action of the air-pump.

B. A. ORDINARY EXMINATION.

ASTRONOMY—OPTICS.

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Prove that at any place on the Earth's surface the altitude of the pole is equal to the latitude of the place.

(*a*) In the Northern hemisphere, stars whose south polar distance is less than the latitude will never rise.

2. How has the length of the diameter of the Earth been ascertained?

3. Investigate the method of finding the distance of the Moon from the Earth.

4. Calculate the length of the Earth's shadow from the following data:
Mean diameter of Sun as seen from the Earth = 1923″.
Mean diameter of Earth as seen from the Sun = 17″.
Diameter of the Earth = 7926 miles.

5. When will the motion of Mars be retrograde? Explain the fact.

.6 How are places set down in their proper relative position on a terrestrial globe? How would you use the globe to find the shortest distance in miles between any two places?

7. State the laws of reflection of light.

8. A pencil *converges* on a *convex* mirror of 4 feet radius to a point 40 feet behind, find the conjugate focus.

9. With a given convex lens it is desired to form on a screen an image which shall be eight times as large as the object, find the ratio of the distance of the object from the lens to the focal length.

10. Describe the construction and action of the Camera obscura.

11. Find the magnifying power of a Cassegrainian telescope of 4 feet focal length of speculum and $\frac{1}{2}$ inch eye-glass; the secondary speculum being of 3 feet focal length.

B. A. ORDINARY EXAMINATION.

MECHANICS—HYDROSTATICS.

THURSDAY, APRIL 12TH :—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D. / REV. A. N. MCQUARRIE, B.A.

A.

1. A weight of $15\frac{1}{2}$ lbs. placed on a smooth table is attached to a string which passes horizontally over a pulley at the end of the table, and then hanging vertically is tied to a weight of $16\frac{1}{2}$ lbs.; find what space the latter weight will pass through in one second.

2. Find the centre of gravity of a homogeneous thin plate cut in the form of a triangle.

3. A seconds pendulum is carried to the top of a mountain 2 miles high, find the loss or gain in the number of vibrations it will there make in a mean solar day, investigating a formula for the purpose.

4. The vessel containing the mercury at the base of a barometer tube is large; a block of iron is placed floating in it; will this have any effect, and if so what, on the height of the mercury in the tube as indicated by the scale ?

5. At the temperature 212° and pressure 30 inches, calculate the *relative volume* of steam, the sp. gr. of the steam being .622, assuming that the volume of a given weight (W) of air at a given temperature (t) and pressure (p) is

$$\frac{W}{5.375} \times \frac{460+t}{p}$$

6. If in the air-pump the volume of the receiver and leading-tube be 3 times that of the pump, calculate the elastic force of air in the receiver after the 5th and after the 15th strokes, the height of the barometer being 30 inches.

B.

7. If three forces meeting at a point equilibrate each other, the sum of their moments, with respect to any point, is equal to zero.

8. If the resistance applied perpendicularly to one extremity of a lever be 247 lbs.; the lever being 22 inches long and having its fulcrum 3 inches distant from the extremity to which the resistance is applied;—find the amount of force which should be applied to the other extremity of the lever, at an angle of 27°, so as to balance the given resistance.

9. The centrifugal force is directly proportional to the square of the velocity, and inversely proportional to the radius of the circle described.

10. If the surface of a liquid, subject to any forces whatever, be free, it must, at any point taken upon it, be perpendicular to the resultant of the forces which act upon that point.

11. State Dalton and Gay-Lussac's law; and investigate the formula for Fahrenheit's thermometer.

12. Describe Nicholson's Hydrometer, and the manner of using it.

B. A. AND THIRD YEAR.

ELECTRICITY—MAGNETISM—SOUND.

FRIDAY, APRIL 6TH :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Describe any simple electroscope and the mode of using it to determine whether a body is charged positively or negatively.

2. Describe an experiment showing that in the Leyden jar the electricity is on the glass and not on the metallic coating.

3. Describe the Leclanché cell; and state for what kind of work it is most suitable, giving the reason.

4. The current of a 50-cell battery is sent through a long chain composed of alternate links of silver and of platinum, and a certain luminous effect is produced; describe and explain it. What conditions are necessary to its production?

5. Define *induction*. Describe an experiment showing the production of an induced current by a continuous current, and state the laws concerning this.

6. In the wire surrounding a common terrestrial globe if used in illustrating Ampére's theory of terrestrial magnetism, in what direction must the current flow in order to represent the magnetic condition of the Earth?

7. State Ohm's law.

(*a*) Two cells, each of 1 ohm resistance, are connected in series ("end to end") by a wire the resistance of which is also 1 ohm. If each of these when connected singly by short thick wires to a galvanometer, whose resistance may be neglected, deflects the needle 25°, how much will the combination deflect it, the connections being made by short thick wires?

8. If an Atlantic cable were completely broken far out in the ocean, how could the distance of the break from the shore be ascertained?

9. Describe a wave of sound, illustrating by a diagram; define length of wave and amplitude of vibration.

10. How can it be shown experimentally that when the fundamental note of an open tube is sounded, there is a node? Explain the mode of production of this node

11. How may it be shown experimentally that a tube of a certain definite length will resound to a tuning fork of a given note? What is the rule for the length? Explain the physical action.

12. Two tuning forks, making 512 and 502 vibrations respectively in a second, are sounding simultaneously, what is the number of beats per second?

HONOUR EXAMINATIONS IN MATHEMATICS.

FIRST YEAR.

GEOMETRY.

TUESDAY, APRIL 24TH:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. A common tangent to any two circles is divided harmonically by any other circle having the same radical axis with the two given circles.

2. Through a given point within a given circle any tranversal is drawn and a point taken on it such that the reciprocal of its distance from the

given point is equal to the difference of the reciprocals of the intercepts between the given point and the circle; find the locus of the point of section.

3. Describe a circle touching three given circles, and prove that eight such circles can be described.

4. A centre of similitude of two circles is joined with the point of contact of one of the circles with either common tangent through the other centre of similitude. Prove that the line joining the middle point of the line so drawn and the centre of the circle bisects that common tangent.

5. If through any point O, on the circumference of a circle, any three chords be drawn, and on each, as diameter, a circle be described, these three circles will intersect in three other points, which lie in one straight line.

6. Given six points on the straight line, find a seventh point on the given line, such that the anharmonic ratio of it and three of the points, taken in an assigned order, shall be equal to the anharmonic ratio of it and of the other three points, taken in an assigned order.

7. The anharmonic ratio of four fixed points on a circle is constant.

8. The reciprocals of lines in harmonical progression are in arithmetical progression.

9. If a hexagon be inscribed in a circle the intersections of the three pairs of opposite sides lie on the same straight line.

a. Deduce from this a property of the inscribed triangle.

10. In a given circle inscribe a triangle, having its base parallel to a given line, and its two sides passing through two given points in this straight line.

11. Describe a circle touching a given straight line and two given circles.

12. Inscribe a square in a triangle.

FIRST YEAR.

THEORY OF EQUATIONS—ALGEBRA.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Apply Horner's Method to find the root, which is between 2 and 3, of the equation

$$x^3+10x^2+6x-120=0$$

2. Apply Newton's Method to find the root, which is between 2 and 3, of the equation

$$x^3-4x-12=0$$

3. Apply Sturm's Theorem to find the situation of the real roots of the equation

$$x^4+x^3+x-1=0$$

4. Solve the equation

$$x^3-3x-2=0$$

5. Solve the equation

$$x^5-2x^4-19x^3-19x^2-2x+1=0$$

6. The equation $x^4-2x^3-2x^2+8x-8=0$ has two roots of the form $a,-a$, solve it.

7. Find limits to the positive and negative roots of

$$x^6-5x^5+x^4+12x^3-12x^2+1=0$$

8. Show that the equation $x^5-4x^2+3=0$ has at least two imaginary roots.

9. One root of the equation $x^3-x^2+3x+5=0$ is $1-2\sqrt{-1}$; find the other roots.

10. Transform 1534 from the senary to the denary scale.

11. Find the sum of the series $1-\frac{1}{2}+\frac{1}{4}-\frac{1}{8}$, &c., ad. inf.

12. If $y^3-3y+x=0$, find y in a series of powers of x.

13. Find the number of variations of n things taken r together.

14. Find the expansion of a^x in a series of powers of x.

15. Find what sum P dollars will amount to at compound interest in n years at a given yearly rate of interest.

SECOND YEAR.

ANALYTIC GEOMETRY

TUESDAY, APRIL 24TH :—MORNING 9 TO 1

Examiner,.....ALEXANDER JOHNSON, L.L.D.

1. Prove that in all the conic sections the radius of curvature is equal to the cube of the normal divided by the square of the semi-parameter.

2. Describe the *Elliptic Compasses*, and prove the principle on which they are constructed.

3. If normals be drawn at the extremities of any focal chord of an llipse, a line drawn through their intersection parallel to the axis, major will bisect the chord.

4. The line joining the focus to the intersection of two tangents bisects the angle which their points of contact subtend at the focus.

5. Find the principal parameter of the parabola

$$9x^2+24xy+16y^2+22x+46y+9=0$$

6. If any line cut an hyperbola, the portions intercepted between the curve and its asymptotes are equal.

7. If r and p be the radius vector and perpendicular respectively from the focus to the tangent to an ellipse, prove that

$$\frac{1}{p^2} = \frac{1}{b^2}\left(\frac{2a-r}{r}\right)$$

8. The sum of the distances of any point on an ellipse from the foci is constant and equal to the axis major.

9. Prove by polar co-ordinates, that if a chord of a circle be drawn through any fixed point the rectangle under its segments will be constant.

10. Solve analytically the following problems in Euclid : "On a given straight to construct a segment of a circle containing an angle equal to a given angle." Find the radius and the co-ordinates of the centre of the circle.

11. Given the base of a triangle, and that one base angle is double the other, find the locus of the vertex.

12. Find the equations of the perpendiculars of the triangle the co-ordinatess of whose vertices are (2, 1), (3,—2), (—4,—1); and prove that they meet in a point.

13. Find the locus of the middle points of rectangles inscribed in a given triangle.

SECOND YEAR.

CALCULUS—TRIGONOMETRY.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,..... .... ALEXANDER JOHNSON, LL.D.

1. Find the length of the logarithmic curve $y=ca^x$.

2. Find by integration the area of the ellipse.

3. Find the formulaof reduction for $\int \frac{dx}{(a+b\ cos\ x)^n}$

4. Integrate $\int sin^2\theta\ cos^3\theta\ d\theta$, $\int \frac{sin^2\theta\ d\theta}{(1+cos\ \theta)^2}$.

5. Integrate $\int e^{ax} sin^2\ x dx$, $\int \frac{e^x\ dx}{x^4}$, $\int \frac{x^4\ dx}{(a^2+x^2)^2}$, $\int sin^4\ \theta d\theta$.

6. Integrate $\int \frac{(2x+3)\ dx}{x^3+x^2-2x}$, $\int \frac{x\ dx}{^2+2x-3,}$

7. Integrate $\int \frac{dx}{x\sqrt{x^2-a^2}}$, $\int \frac{dx}{1+x+x^2}$.

8 Prove the expression in polar co-ordinates for the perpendicular on the tangent to a curve

$$\frac{1}{p^2}=u^2+\left(\frac{du}{d\theta}\right)^2$$

and show hence that $\frac{d^2u}{d\theta^2}+u=\frac{1}{p^3u^2}\frac{dp}{dr}$.

9. If n be the length of the normal, and r the radius of curvature of any curve, prove

$$r^3=\frac{n^3}{y^3\frac{d^2y}{dx^2}}$$

10. Find the value of x which gives a maximum value to

$$\frac{sin\ x.\ cos\ x}{cos^2(60^o-x)}$$

11. Find the value of $\frac{1-sinx+cos\ x}{sin\ x+cos\ x-1}$ when $x=\frac{\pi}{2}$.

12. Find the first four terms in the expansion of $sec\ x$.

13. Prove that the area of a spherical triangle is proportional to the excess of the sum of its three angles above two right angles.

14. In a spherical triangle $sin\ C\ cot\ A = Cot\ a\ sin\ b - cos\ b\ cos\ C$.

15. Prove $sin\ a = a - \frac{a^3}{1.2.3.} + \frac{a^5}{1.2.3.4.5} + \text{etc.}$

16. Prove Demoivre's Theorem for a negative index.

THIRD YEAR.

ASTRONOMY—OPTICS—HYDROSTATICS.

TUESDAY, APRIL 24TH:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Investigate the formula for determining the aberration of a star in latitude:—

$$\text{Aberration} = -\ 20''.45\ \sin\ l\ \sin\ (L - L')$$

where l = latitude of star, L = longitude of sun, L' = longitude of star.

2. Show how the heliocentric latitude and longitude of a planet may be obtained from the geocentric latitude and longitude.

3. If ϕ and ϕ' be the geographical and geocentric latitudes respectively of a place on the earth's surface, and a and b the equatorial and polar radii of the earth, prove that

$$\phi - \phi' = \frac{a-b}{a}\ sin\ 2\phi$$

4. Find the time of year when the twilight is shortest at a given place.

5. Investigate a method for determining the time when the sun is at the first point of Aries.

6. Prove the formula for determining the latitude by observations on the pole-star:—

$$lat. = a - \Delta\ cos\ h + \tfrac{1}{2}\ \Delta^2\ sin\ 1''\ tan\ a\ sin^2\ h.$$

where h = hour angle of star, Δ = its polar distance, a = true altitude.

7. Explain a method of measuring the index of refraction of a ray corresponding to one of the fixed lines in the spectrum, out of air into any medium formed into a prism.

8. Prove that when a ray of light passes through a prism, the deviation is a minimum when the angle of incidence is equal to the angle of emergence.

9. Find the caustic curve when parallel rays are incident on a reflecting semicircular mirror and in its plane.

10. Investigate a formula for determining heights by the barometer, neglecting the variation of gravity.

11. Investigate formulæ for determining the centre of pressure of a plane surface immersed in a liquid.

12. A closed vessel is completely filled with homogenous liquid, which is made to rotate uniformly about an axis inclined to the vertical; find the surfaces of equal pressure.

THIRD YEAR.

MECHANICS.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. A beam can turn in every direction about one end which is fixed; the other end rests on a rough inclined plane. Find the limiting position of equilibrium.

2. Find the analytical condition for a single resultant when any number of forces in any direction act on a rigid body.

3. Show that two couples in intersecting planes result in a single couple, and find its axis.

4. A heavy uniform beam rests against a rough horizontal plane and against a rough vertical wall, the vertical plane through the beam being at right angles to the wall and the ground; determine the greatest weight that can be affixed to it at a given point, so that equilibrium may be preserved.

5. A system of heavy bars, freely articulated, is suspended from two fixed points, P and Q; determine the magnitudes and directions of the stresses at the joints.

6. Find the position of equilibrium of a uniform heavy beam, one end of which rests against a smooth vertical plane, and the other against the nternal surface of a given fixed smooth sphere.

7. Prove that the condition necessary and sufficient for the equilibrium of a system of forces in one plane acting on a rigid body is that the sum of ihe virtual works of the forces is equal to zero for any and every virtual displacement which violates none of the geometrical conditions of the system.

8. Two smooth heavy rings slide on two rods which are inclined to the horizon at given angles; a string connecting these two rings passes through another smooth heavy ring; find the position of equilibrium.

9. When a point is moving in a plane curve, find expressions for the component accelerations at any instant, along and perpendicular to the radius vector.

10. A particle attracted towards a fixed point by a force varying directly as the distance, is projected with a given velocity from a given point, outward in the direction of the line joining the two points, find the subsequent motion.

11. A heavy particle is projected with a given velocity in a vacuum, find the elevation necessary that it may pass through a given point.

12. When a particle is acted on by a central force prove that the velo city at any point of the orbit is independent of the path described.

13. Find the law of force tending to the pole, under which a particle may describe an equiangular spiral.

14. When a particle describes an ellipse under a centre of force in the focus, prove $nt = u - e \sin u$ and

$$\theta = nt + 2e \sin nt + \frac{5}{4} e^2 \sin 2nt$$

approximately.

B.A. HONOURS IN MATHEMATICS AND NATURAL PHILOSOPHY.

I.

PLANETARY THEORY—NEWTON'S PRINCIPIA.

TUESDAY, APRIL 3RD:—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. State the steps of the investigation by which from three complete observations of a planet the elements of the orbit might, theoretically, be determined.

2. Explain the principle of the Superposition of small motion; state why it is applicable in the Planetary Theory, and the advantage of it.

3. Express the disturbing function R in terms of the polar co-ordinates of the disturbed and disturbing planet on a fixed plane, and of their distances from it.

4. Prove that $\frac{da}{dt}=\frac{2na^2}{\mu}\frac{dR}{dr}$

5. Show generally that the periodic terms of R are of the form $P\ cos\ \{(pn+qn')t+Q\}$ where p and q are any positive integers or zero, P is a function of the mean distances, eccentricities and inclinations, and Q a function of the longitudes of perihelia, nodes and epochs.

6. Prove that the *principal* part of the co-efficient of a term of the above form with the negative sign is of the order $p-q$.

7. The mean motions of Neptune and Uranus being in the ratio of 1 : 2 show that there is an *inequality of long period* arising from a term in R which is of the first order.

8. Assuming the formulæ given on the accompanying paper, calculate the variation in the radius vector arising from the term $m'Me\ \ Cos\ \ \{(n-2n')t+\varepsilon-2\varepsilon'+\tilde{\omega}\}$, neglecting small quantities of orders higher than the first, $\delta r=\frac{m'Mna^2}{\mu(n-2n')}Cos\ 2\ \{(n-n')t+\varepsilon-\varepsilon'\}$

$$e\ Cos\ \{(n-2n')t+\varepsilon-2\varepsilon'+\tilde{\omega}\}+e\ Cos\ \{(3n-2n')t+3\varepsilon-2\varepsilon'-\tilde{\omega}\}$$

9. Give a geometrical construction for the centre of the instantaneous ellipse in consequence of the secular variations of e and $\tilde{\omega}$, assuming

$$e\ Cos\ \tilde{\omega}=M_1\ Cos(g_1+\gamma_1)+M_2\ Cos(g_2\ t+\gamma_2)$$
$$e\ Sin\ \tilde{\omega}=M_1\ Sin\ (g_1\ t+\gamma_1)+M_2\ Sin\ (g_2\ t+\gamma_2)$$

10. In Newton's Lunar Theory, consider the effect of the central disturbing force on the eccentricity of the Moon's path.

11. Show that if the orbit of the Moon had been originally circular, it would assume the form of an oval, whose axis major passes through quadratures, and axis minor through syzygies.

12. The law of force in an orbit nearly circular being given, find an approximate value of the apsidal angle.

13. A body describes an ellipse round a centre of force in the centre of the ellipse, find the law of force.

II.

THEORY OF THE POTENTIAL—ELECTRICITY.

TUESDAY, APRIL 10TH:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Prove that the gravitation potential of any attracting solid varies in a continuous manner from point to point in space, whether the points chosen be inside any portion of the mass or outside it.

2. Define *tubes of force*, and prove that at all points in empty space on a given line of force the resultant attraction is inversely proportional to the normal sections of the tube of force at these points.

3. If a self-attracting sphere of uniform density and radius a changes to one of uniform density and radius a', find the amount of work done by its mutual attractive forces.

4. If an attracting mass lie on or within a level surface on which the potential is not zero, prove that in all space outside this surface the potential is less than on the surface, and has the same sign.

5. If Q be the whole charge on an electrified circular plate of radius a, prove that the *surface density* at any point at the distance r from the centre of the plate is

$$\frac{Q}{4\pi a\sqrt{a^2-r^2}}$$

6. Show by the method of *Electric Images* that if an electrified point I be placed in front of a given spherical conductor which is connected with the ground, the surface density of the electricity induced at any point of the sphere varies inversely as the cube of the distance from the inducing point I.

7. Assuming that the components, along the principal axes, of the attraction of a homogeneous ellipsoid on a particle placed anywhere on its surface are of the forms Ax, By, Cz, where A, B, C, are constants, find the condition that an oblate spheroid of uniform density may have its own surface for one of its level surfaces.

8. Describe Sir Wm. Thomson's Quadrant Electrometer, and the method of using it.

9. Describe Sir W. Thomson's method for determining the resistance of a galvanometer.

10. On Biot's hypothesis of terrestrial magnetism prove that if I be the intensity in the magnetic latitude l, and E the intensity at the magnetic equator,

$$I = E\sqrt{1+3\sin^2 l}$$

11. Explain the method of finding the *horizontal component* (H) of the Earth's magnetism at any place in *absolute measure*, and prove the two following equations involved in it:

$$MH=\frac{4\pi^2 I}{t^2}$$

$$\frac{M}{H}=r^3 \tan\theta$$

I being the moment of inertia of the magnet employed, M its magnetic moment, etc.

12. How is the electric potential at any point in the air measured?

III.

SURFACES.

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Investigate the differential equation of surfaces generated by right lines which meet a fixed axis;

$$rx^2+2s\,xy+ty^2=0.$$

2. Find the equation of the right conoid passing through the axis of z and through a plane curve whose equations are

$$x=a,\ y^2=kz$$

3. Define a geodesic line, and prove that the plane of two consecutive elements of the geodesic contains the normal to the surface.

4. The tangent planes to the surface of centres at the two points where any normal cuts it, cut each other at right angles.

5 Find the lines of curvature and the principal sections at any point of a surface generated by the revolution of any plane curve round an axis in its plane.

6. Any tangent plane to a surface is intersected by a consecutive tangent plane in the diameter of the indicatrix which is conjugate to the direction in which the consecutive point is taken.

7. The axes of any tangent cone to a quadric are the normals to the three confocals which can be drawn through the vertex of the cone.

8. The focal lines of a cone are perpendicular to the circular sections of the reciprocal cone.

9. Find the equation of the cone whose vertex is $x'\ y'\ z'$, and which stands on the conic in the plane of

$$xy,\ \frac{x^2}{a^2}+\frac{y^2}{b^2}=1.$$

10. Two planes, mutually perpendicular to each other, pass each through a fixed line; find the surface generated by their line of intersection.

11. Any two circular sections of an ellipsoid of opposite systems lie on the same sphere.

12. Find the condition that the general equation of the second degree should represent a cone.

13. Find the angle between the lines

$$\frac{x}{2} = \frac{y}{\sqrt{3}} = \frac{z}{\sqrt{2}}, \quad \frac{x}{\sqrt{3}} = y, \; z = 0.$$

14. Find the equation of the plane through the two intersecting lines

$$\frac{x-x'}{\cos\alpha} = \frac{y-y'}{\cos\beta} = \frac{z-z'}{\cos\gamma}; \quad \frac{x-x'}{\cos\alpha'} = \frac{y-y'}{\cos\beta'} = \frac{z-z'}{\cos\gamma'}$$

IV.

CALCULUS.

THURSDAY, APRIL 19TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Integrate by Monge's Method the equation

$$rx^2 + 2\,s\,xy + ty^2 = 0$$

2. Integrate $(mz - ny)\,p + (nx - lz)\,q = ly - mx$.

3. The complete primitive of a partial differential equation of the first order being expressed in the form

$$x = f(x, y, a, b,)$$

show that the general primitive will be obtained by eliminating a between the equations

$$z = f\{x, y, a, \phi(a)\}$$

$$0 = \frac{d}{da} f\{x, y, a, \phi(a)\}$$

4. Find the complete solution of the equations

$$4\frac{dx}{dt} + 9\frac{dy}{dt} + 44x + 49y = t.$$

$$3\frac{dx}{dt} + 7\frac{dy}{dx} + 34x + 38y = e^t.$$

5. Find the condition that $P\,dx + Q\,dy + R\,dr = 0$ should be derivable from a single primitive and apply it to

$$(y+a)^2\,dx + z\,dy - (y+a)\,dz = 0$$

Find the complete primitive of this equation.

6. Find the complete primitives of the equations

$$nx^3\frac{d^3y}{dx^2} = \left(y - x\frac{dy}{dx}\right)^2$$

$$a^2\frac{d^4y}{dx^4} = \frac{d^2y}{dx^2}$$

7. Solve by the method of the variation of parameters the equation

$$\frac{d^2y}{dx^2} + n^2y = \cos ax.$$

8. Find the complete solution of

$$\frac{d^2y}{dx^2} - 4\frac{dy}{dx} + 13y = 0$$

9. Determine the integrating factor for

$$(x^2+y^2+2x)\,dx + 2y\,dy = 0$$

and integrate the equation.

10. Prove that if V and v are two functions of x and y which satisfy the equation

$$\frac{dV}{dy}\frac{dv}{dx} - \frac{dV}{dx}\frac{dv}{dy} = 0$$

then V is expressible as a function of v only.

a. Apply this to show that the expression

$$x^2y^2 + x^2 + y^2 + (2xy-1)(x+y)$$

is a function of x and y, only as being a function of $xy + x + y$.

11. Integrate the linear differential equation

$$\frac{dy}{dx} + Py = Q$$

where P and Q are functions of x.

12. Change the independent variable from x to θ in the expression $\frac{d^2y}{dx^2}$, supposing $x = \sin\theta$.

3. Transform

$$\frac{d^2V}{do^2} + \frac{d^2V}{dy^2} + \frac{d^2V}{dz^2}$$

nto a function of r, θ, ϕ, being given $x = r\sin\theta\cos\phi$, $y = r\sin\theta\sin\phi$, $z = r\cos\phi$.

14. Eliminate the arbitrary functions from the equation

$$z\frac{x^3y}{6} + \phi(y+ax) + \psi(y-ax).$$

V.

MECHANICS.

TUESDAY, APRIL 24TH :—MORNING, 9 TO 1.

Examiner, ...ALEXANDER JOHNSON, LL. D.

1. Prove the following expression for the potential at any external point of an ellipsoid whose strata of equal density are concentric ellipsoids of small ellipticity:

$$V=\frac{M}{\rho}+\frac{A+B+C-3I}{2\rho^3}$$

2. Find the Force-function due to the attraction of any body on any other distant body.

3. Prove that the moment of the attraction of the sun about one of the principal axes of the earth at its centre of gravity may be expressed by

$$-3n'^2(C-A)\,Cos\,\alpha\,Cos\,\gamma\left(\frac{R'}{R}\right)^3$$

Where n' = mean angular velocity of sun about earth.
R' = sun's mean distance.
R = distance of centre of gravities of sun and earth.

4. A body having a fixed point in it is in motion; there are no impressed forces; two of the principal axes are equal; find the rate of motion of the invariable line and of the instantaneous axis in the body.

5. Explain Poinsot's representation of the motion of a body round a fixed point by means of the momental ellipsoid.

6. A particle describes an ellipse freely about a centre of force in its centre. Find the whole energy of its motion.

7. A spherical membrane is stretched into a sphere whose radius is r; if Tds be the tension across any elementary arc ds when the membrane is stretched, where T is a known function of r, depending on the nature of the material, prove that the work done by the tensions, when the membrane is stretched so that the radius of the sphere is increased by dr is $8\pi\,T\,r\,dr$.

8. A body moving freely about a fixed point is expanding under the influence of heat, so that in structure and form the body is always similar to itself. If the law of expansion be that the distance between any two particles at the temperature θ is equal to their distance at

temperature zero multiplied by $f(\theta)$ show that the vis viva of the body=

$$A\omega_x^2+B\omega_y^2+C\omega_z^2+\tfrac{1}{2}(A+B+C)\left(\frac{d}{dt}\log f(\theta)\right)^2.$$

where A, B, C, are the principal moments at the fixed point.

9. If the motion of a body turning about a fixed point be referred to moving axes, find the accelerations of any particle parallel to the axes.

10. Define centre of percussion. Determine the conditions that, when a body is turning freely about a fixed axis, there shall be a centre of percussion, and find its position.

11. The motion of the centre of gravity of a system acted on by any force is the same as if all the mass were collected at the centre of gravity and all the forces were applied at that point parallel to their former directions.

12. At every point of a material system there are always three principal axes at right angles to each other.

VI.

MECHANICS.

TUESDAY, APRIL 24TH;—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Find the differential equation for determining the longitudinal vibrations of a rod and integrate it.

2. The air in a tube closed at one end is set in motion by the oscillations of a disc at the open end, the plane of which is perpendicular to the axis of the tube, determine the nature of the vibrations set up in the tube.

3. A vessel, having a horizontal aperture in its base, is partially immersed in fluid of unlimited extent, and is kept constantly full of the same fluid; when the motion is steady, find the rate at which fluid is poured in.

4. A vessel in the form of a surface of revolution has a small aperture at its lowest point: determine its form so that the surface of water, contained in it, may descend uniformly.

5. Find the "equation of continuity" in hydrodynamics.

6. Give the leading steps in the investigation of the problem, to find a possible form of the surface of a mass of homogeneous fluid, which is rotating uniformly in a state of relative equilibrium, the particles attracting one another according to the law of nature.

7. A string lying in the form of a circle on a smooth table is revolving like a wheel, find the tension of the string.

8. Find the radius of gyration of a right cone about an axis through its vertex at right angles to its geometrical axis.

9. A uniform rod moves in a vertical plane within a hemisphere; find its angular velocity in any of its positions, its initial position being one of instantaneous rest.

10. A particle, moving in a resisting medium, is acted on by a force, whose direction is constantly parallel to a fixed line, find the resistance that a given curve may be described.

11. A particle is constrained to move on a smooth curve under the action of a central force tending to the pole, and the pressure on the curve varies always as the curvature, prove that P is proportional to

$$\frac{1}{p^3}\frac{dp}{dr}$$

12. An elastic string, uniform in its natural state, is suspended from one extremity, which is fixed, and has a weight attached to the other; find the extension of the string, taking its own weight into account.

13. Find the work done in dragging a heavy body without acceleration up a rough inclined plane by a force whose direction always passes through a fixed point.

VII.

EXPERIMENTAL PHYSICS.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. What is elliptically polarized light? Explain why when a plane-polarized ray undergoes total reflexion, the reflected light is, generally, elliptically polarized.

2. State Brewster's law for determining the angle of polarization when reflected light is completely polarized. Explain it.

3. How is the assumption in Newton's theory explaining the colours of *thin plates* disproved experimentally?

4. Explain the production of the *interior fringes* in the shadow of a narrow opaque body.

5. Investigate a method for calculating the length of a wave of light from the phenomena seen when light issuing from two small apertures is received on a screen.

6. Deduce the laws of refraction of light from the principles of the wave theory.

7. Explain Mayer's method of calculating the mechanical equivalent of heat.

8. Show that the velocity of draught of a chimney may be obtained from the formula

$$v = \sqrt{2\,g\,a\,(t'-t)\,h}$$

where a is the coefft. of expansion of air, h the height of the chimney, t' the mean temperature of the air inside the chimney, and t the temperature of the surrounding air.

9. Describe the principles of Cailletet's experiment for liquefying oxygen.

10. Equal lengths of the same thin wire traversed by the same electrical current are placed respectively in 1 kilogramme of water and 3 kilogrammes of mercury. The water is raised a degrees in temperature, by how much will the mercury be raised ?

ENGLISH LANGUAGE AND LITERATURE.

FIRST YEAR.

ENGLISH LITERATURE.

WEDNESDAY, APRIL 11TH :—MORNING, 9 TO 1.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Write an account of John Scotus Erigena. What is noteworthy regarding his literary work?

2. What do you know concerning Chaucer's *Temple of Fame* and the points it illustrates?

3. Who were the three leading Scotch writers of the fifteenth century? Sketch the lives and notice the works of TWO of them.

4. Set forth such features of the contemporary history of Europe as throw light on the literature of the Elizabethan Era.

5. Describe the habits, social and intellectual, of the Elizabethan dramatists as a class. Name five Pre-Shakespearian dramatists, and one play of each.

6. Sketch Shakespeare's life, and notice interesting points of a general character regarding his plays.

7. Briefly mention the two great Puritan literary controversies of Elizabeth's reign, and sketch one of them in detail.

8. Give the outline of Spenser's *Mother Hubberd's Tale*. What was its aim? Discuss Spenser's influence on our literature during the reign of Elizabeth?

FIRST YEAR.

ENGLISH LANGUAGE AND ANALYSIS.

WEDNESDAY, APRIL 11TH :—AFTERNOON, 2 TO 5.

Examiner,.....CHAS. E. MOYSE, B.A.

A. 1. What is meant by onomatopœia? Give three examples. 2. What is vowel weakening? Give two examples. 3. What is the true basis of classification of the letters of the alphabet? 4. How many vowel sounds are there? Why? How many are said to exist in English? 5. Write the conson-

ants of the English alphabet, and opposite each say whether it is a *Snrd* of a *Sonant*. 6. Give two other facts regarding each of the consonants of the last questions as tersely as possible. 7. The majority of English words are not Saxon: Why then is English a Teutonic language? Illustrate. Write a sentence containing ten classical words and underline them. 8. Draw the triangles illustrating Grimm's Law in regard to the English *deer* and *kin*. Give the three related words in the first triangle and two of the three in the second. 9. Comment on *sovereign*, *whale fishery*, *rhyme*. 10. Into what leading dialects did A. S. break up? Distinguish between them. Which finally became English? 11. Explain the long *s* (written) and the two forms of *r*. 12. Explain *him were liefer; chill*. 13. How does Shakespeare distinguish between *thou* and *you?* 14. Give the derivation of *father*, *brother*. Explain *vixen*, *Minchin* lane. 15. *King:* true and false etymologies? *Drake:* history of word? 16. The history of the suffix *ster?* 17. Comment on *news*, *means*, *riches*. 18. Comment on:—he must *needs* die; *whilom*. 19. Three obsolete ways of forming plural of nouns? two examples of each? trace the forms of two of your six words. 20. Account for difference of sound of final *s* of *tubs*, *sits*.

B. Analyse:—

I fell in with a humourist on my travels, who had in his chamber a cast of the Rondanini Medusa, and who assured me that the name which that fine work of art bore in the catalogues was a misnomer, as he was convinced that the sculptor who carved it intended it for Memory, the mother of the Muses.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiners,..... ..... { CHAS. E. MOYSE, B.A.
REV. PROF. MCQUARRIE, B.A.

[N.B.—McGill Students will answer set B.]

1. Give the opening and closing dates of the four periods of English History.

2. Give some account of the principal persons who, during the Anglo-Saxon period, cultivated Latin learning.

3. Describe the natural course in which the development of literature among a people takes places; and point out the *peculiar* character of Anglo-Saxon literature.

4. State briefly what you know about Caedmon, and give an outline of his *Dream-song*.

5. Mention the distinctive features of the Latin Pasquinades, Gesta Romanorum and Romances of Chivalry.

6. Give an outline of the Romances of the Round Table.

7. Describe the changes which our language underwent:
(*a*) In its process of *Decay*.
(*b*) In its process of Reconstruction.

8. State briefly what you know about the Scottish Poet Barbour.
(*a*) With what English author was he contemporary?
(*b*) Give an outline of his "Bruce."

9. Mention the several classes of words, still in common use, that are Anglo-Saxon.

(B)

1. Mention one work of each of the following: William Godwin, Dickens Wordsworth, Landor, Leigh Hunt, Brougham, Mary Cowden Clarke William Chambers, Charles Knight, Gifford, Tennyson, Samuel Taylor Coleridge, Byron, Shelley, Burke, Charles Lamb, John Wilson, Macaulay, Thomas Paine, Thomas Campbell.

2. Sketch the life of John Keats, and state what you know concerning the thought and the style of his longer poems.

3. Point out essential differences between Byron and Shelley *as poets* and also in regard to other particulars brought under your notice. What is Byron's true place in the literature of his time?

4. Sketch the career of Charles Knight.

5. Take any three works from your answer to the first question. State what you know of their subject-matter, criticise them, and discuss their immediate influence on contemporary thought if it proved remarkable.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE:—SHAKSPEARE, (*Tempest*).

MONDAY, APRIL 9TH:—AFTERNOON, 2 TO 5.

Examiner,.....CHAS. E. MOYSE, B.A.

1. From what internal evidence do you know that the Tempest is one of Shakespeare's latest plays?

2. What canons of Dramatic Art did Shakespeare observe in the construction of the Tempest?

Criticise those canons.

3. What is the source of the Tempest? Where has the island been placed?

4. Write the names of the characters in the Tempest, and say very briefly what each is and does.

5. Give the leading sentiments of Act I. Sc. II., after the entrance of Ariel:—

Ari.—All hail, great Master! grave Sir, hail? I come
To answer thy best pleasure.

6. From the 1st Act take ten distinct peculiarities of Elizabethan language and five distinct peculiarities of Shakespearian versification.

7. Notice some allegorical explanations of the Tempest.

8. Continue the speeches commencing with
(*a*). These our actors.
As I foretold you, are all spirits.....
(*b*). Ye elves of hills, brooks, standing lakes and groves.

INTERMEDIATE EXAMINATIONS.

ENGLISH HISTORY AND ESSAY.

TUESDAY, APRIL 10TH:—MORNING, 9 TO 1.

Examiners,..... ..... { CHAS. E. MOYSE, B.A.
REV. PROF. MCQUARRIE, B.A.

A. 1. Sketch the reign of Henry II.

2. Name in due order twelve important (and unconnected) events which happened between the years 1601 and 1701.

3. Take two of those events and write in detail on them.

4. State the chief terms of the Union between England and Scotland.

5. Give an outline of the American war of Independence.

6. Who were the Chartists? What do you know concerning them

7. What were the immediate causes of the Crimean War? When did it take place? What do you know of its history?

B. Write an essay, not exceeding two pages in length, on one of the following subjects:—

A railway journey.
The benefits of civilization.
Books.

THIRD YEAR.

RHETORIC AND ENGLISH LITERATURE (*Chaucer*).

FRIDAY, APRIL 20TH:—MORNING, 9 TO 1.

Examiners,..... { REV. J. CLARK MURRAY, LL.D. / CHAS. E. MOYSE, B.A.

A. Rhetoric [two hours.]

1. State the fundamental law for all use of language.

2. Explain (*a*) the value of conciseness, and (*b*) illustrate by an example of each the three faults to which it is opposed.

3. Point out and remove the fault in each of the following sentences:—

(*a*) We left Cyprus on the left hand.

(*b*) The Royalists were divided into four divisions.

(*c*) Such was the magnanimous affection of his mind.

(*d*) Wolsey left at his death many buildings which he had begun in an unfinished state, and which no one expects to see completed.

(*e*) There is a time when factions, by the vehemence of the fermentation, stun one another.

4. Give in detail the classification of compositions, explaining the principle on which it is based.

5. Explain why the historian must give an account, not only of the temporal order, but also of the causal connection, of events; and mention the principal causes of which he must take cognizance.

6. Explain the nature of political compositions, and show that all compositions tend to acquire something of a poetical character.

B. English Literature [two hours.]

1. Mention ten historical events, domestic or foreign, that happened during Chaucer's life-time.

2. Describe the Knight, and make notes on the various localities in which he saw service.

3. State, in Chaucer's words when you can, three peculiarities of each of the following pilgrims:—Clerk, Marchaunt, Ploughman, Reeve, Sompnour, Pardoner.

4. Jot down prominent facts regarding the inflections of the various moods of the strong verbs in Chaucer, and quote in illustration when you can.

5. Comment on the words or parts of words in italics:—*oxen*, *fader* soule; *that.....he*; the reule of seynt *Maure* or of *Seint Beneyt*; tappe*stere*; *eyghen* (explain all forms) *letuaries*; *e*statlich; an *ale-stake*; *burdoun*; *alther*best; he lip*s*ede; som*del*; *vernicle*; *nas*; *golyardeys*; *but*, *but if*. Refer as many of the above words to the text, as you can.

THIRD YEAR.

(ADDITIONAL DEPARTMENT.)

Burke :—*Thoughts on Present Discontents; Reflections on the Revolution in France.*

WEDNESDAY, APRIL 25TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. What advantages beyond those of his predecessors did George III. enjoy on his accession? What "two only securities for the importance of the people" were "pulled down?" By whom and how.

2. In what times does Burke allude to Mr. Wilkes?

3. What does Burke think of Triennial Parliaments? of government by party?

4. "The political divine proceeds dogmatically to assert that by.....th people of England have acquired.....fundamental rights." Who is referred to? Fill the blanks in the preceding sentence. Name the "rights, and give Burke's arguments regarding any one of them.

5. What does Burke think of the "science of constructing a commonwealth?"

6. "Religion is the basis of civil society." A few leading points in Burke's argument.

7. "The French builders, propose to rest the whole legislature on three bases," name them. How does Burke criticise the basis you select as most important?

8. What argument does Burke place in the mouth of the French peasantry? By what means is it stifled?

THIRD YEAR.

(ADDITIONAL AND HONOUR EXAMINATION.)

Milton:—*Shorter Poems*; *Par. Lost, bks. i. and ii.* Wordsworth:—*Prelude.*

THURSDAY, APRIL 26TH :—MORNING, 9 TO 1.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Comment on the following words :—forlorn, frolic, fantastic, landskip, lubber, bout, bested, fond, decent, hist, virtuous, spell. Refer as many as you can to the text of *L'Allegro* and *Il Penseroso*.

2. Quote from those two poems two responsive sections [not the first or last].

3. The comprehension and the enjoyment of Lycidas have been mentioned as tests of a reader's literary culture. Criticise the statement, and substantiate your remarks by appeal to the poem.

4. What do you know regarding the history of the character *Comus?* Give the outline of the discourse between the two brothers.

5. How does Milton describe the mustering of the general body of fallen spirits ?

6. Give the argument of bk. ii., and quote two separate and well-known passages from that book.

7. Discuss the relation of the Prelude to its time.

8. Show the leading points of Wordsworth's belief in regard to the relation between Nature, Man and God.

9. What influence had Cambridge and France on Wordsworth? [Give his phrases here and there in your answer.]

10. Describe some important episode of the Prelude in detail.

THIRD YEAR.

(ADDITIONAL DEPARTMENT.)

GREEN'S HISTORY TO STUART PERIOD.

FRIDAY, APRIL 13TH :—MORNING, 9 TO 12.

Examiner,..... .....CHAS. E. MOYSE, B.A.

1. Shew the importance of the reign of Edward I. from a legislative, judicial and parliamentary point of view.

2. Give the causes of the Peasant Revolt of 1381, and relate its course.

3. "The ten years 1530-1540 which follow the fall of Wolsey are among the most momentous in our history." Sketch them.

4. Trace the leading features of the history of Ireland down to 1600.

5. Notice the more important statements in Green's Chapter on Puritan England ;—

OR

Set forth the various parts that England played in Continental politics during the Tudor rule.

B. A. ORDINARY EXAMINATION.

HISTORY :—Freeman's *Europe*,—Gree *ngland*. Tudor & Stuart Periods.

FRIDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiners,..... { CHAS. E. MOYSE, B.A.
REV. PROF. MCQUARRIE, B.A.

[Any eight, but not more than eight, questions may be selected from A.

A

1. Narrate the course of the great strife between Greece and Persia.

2. What do you know regarding the reigns of Diocletian, Theodoric Justinian?

3. Of what nation was Charles the Great king? When was he crowned Emperor? over what portions of Europe did he rule?

4. When did the Kingdom of Burgundy fall into the Empire? where was it situated? what represents it on the modern map? where was the County of Burgundy? its fate?

5. Explain how the Kingdoms of Germany and of France came to be established.

6. When did the Eastern Empire commence? when end? State its possessions and its neighbors at some era chosen by yourself.

7. Sketch the career of the Mahometans in Spain.

8. What do you know regarding the First Crusade? the Crusade of 1204 and its consequences? Mention Crusades that happened in the West, and describe one in some detail.

9. Mention salient features in the history of Russia previous to the time of Peter the Great.

10. Who are the Swiss? their old name? whence the modern name? when first used? three famous events of their history.

11. What do you know regarding the Union of Calmar; the Holy Roman Empire; the Sicilian Vespers?

12. Describe the war of the Spanish succession.

B

13. How did Wolsey act in regard to continental politics?

14. Sketch the career of the Spanish Armada.

15. What does Green remark concerning the Elizabethan poets?

16. Who were the "Separatists?"

17. State the leading events that transpired in England between 1660 and 1670.

18. Who was the Duke of Monmouth? Describe his rising.

EXAMINATIONS FOR HONOURS IN ENGLISH.

THIRD YEAR.

ANGLO-SAXON.

FRIDAY, APRIL 6TH:—MORNING, 9 to 1.

Examiner,..... CHAS. E. MOYSE, B.A.

I. TRANSLATE:

A. Hér is mín cnapa, thone ic gecéas.... théoda gehyhtath. Matt. XII. 18-21.

B. Ælfréd. *Trans. of Orosius.* On thæm dagum wæs swá micel ege.... swíthe mǽre gewearth.

(2) Ohthere sǽde thæt sió scír hâtte Hâdgoland.... inn on thæt land.

C. Ælfric. *Life of King Oswold.* Thá æfter Oswoldes slege féng Oswíg his bróthor tó Northhymbra rice..... gelógodon hi upp.

II. GRAMMAR:

1. Take the first sentence of A, and give the sing. and pl. of the possessive and demonstrative pronouns, (all genders), and of the personal pronouns. Conjugate *ceósan* and *wesan.*

2. Decline *cild, here, dǽd, sunu, bóc, eáge,* and give meanings and genders.

3. Decline *gód, se góda;* and give the comp. and sup. of *lang, eald, heáh, micel, lytel.*

4. Write the first ten cardinals and ordinals, and decline the A.-S. words for *two* and *three.*

5. Give the principal parts of *cuman, blâwan, ahreósan, feallan, fîtan, smeócan, áweorpan, gan, sáwan, springan, forscrincan, weaxan, weorthan, slæpan, cwethan, bindan, seón, standan, findan, agifan, aginnan, onfón, niman, faran, arisan.*

6. Conjugate *lufian.*

7. Give the principal parts of *áh, cann, dearr, mæg, mót.*

8. What cases do *geond, tó, on, fram, with,* govern?

9. Notice peculiarities of the *syntax* of the A.-S. infinitive and A.-S. gerund.

III. LITERATURE:

1. Name the chief A.-S. poems and their writers, when known?

2. Give a sketch of the life of Alcuín.

3. What was said in the lectures regarding the nature of A.-S. thought and style?

CONSTITUTIONAL HISTORY OF ENGLAND. (*Lectures.*)

TUESDAY, APRIL 10TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. State the leading characteristics of the Germanic tribes as described by Cæsar.

2. What primitive principles lie at the root of Teutonic polity, and how far can they be traced in the institutions of Saxon England?

3. Tell what you know of the leading ranks of society during the Anglo-Saxon period, and briefly mention the several duties of each.

4. What was the political unit of the Anglo-Saxons? Describe its economy and also that of each of the higher institutions.

5. Briefly notice the government of the Normans in Normandy, and shew in what ways the Norman Conquest and the reign of William I. affected, temporarily or permanently, the constitution of England.

THURSDAY, APRIL 12TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

Translate :—

A. Robert of Gloucester, *Reign of William the Conqueror*, ll. 100-130.

B. *Metrical English Psalter*. *Psalm* xvii., verses 25-51.

C. William of Shoreham. *De Baptismo*, stanzas 10-21.

D. Don Michel of Northgate. *Sermon*, ll. 108-151.

1. Point out dialectic words in A.

2. Contrast dialects of A and C.

3. Write an Essay (one page) treating of broad distinctions between Anglo-Saxon and Early English as two *stages* in language.

HALLAM, *Middle Ages*, Caps. 1, 3, 5, 8, 9.

TUESDAY, APRIL 17TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Of what nation was Charles the Great king? When was he crowned Emperor? Of what portions of Europe did his Empire consist?

2. Tell what you know of the history of the Crusades.

3. Notice important events during the reign of Frederick Barbarossa.

4. Sketch the history of Florence to the end of the fifteenth century, and describe its institutions.

5. When was the Kingdom of Burgundy united to the Empire? What was the Golden Bull? The Imperial Chamber? The Circles?

6. What are the leading features of the progress of the English Parliament under the Lancastrians?

7. What were the essential characteristics of chivalry? Notice the influence of chivalry, and trace its decline.

MONDAY, APRIL 23RD:—MORNING, 10.30 TO 12.

Chaucer, *The Knightes Tale; The Nonne Prestes Tale.*

Examiner,.....CHAS. E. MOYSE, B.A.

1. "Up roos the sonne and up roos Emelye,
And to the Temple of Diane she gan hye."

Narrate the episode to the end.

2. Describe the pyre of Arcite, and give the substance of the remainder of *The Knightes Tale.*

3. "Dremes ben significations
As wel of joye as tribulacions."

What examples does Chanticleer give?

4. Comment on these words: *maat, tas, sparre, breeme, swymbel, alauntz, stevene, weylaway, swevene, contek.*

Macaulay:—Hist. Vol. I. c. i. Milton: *Areopagitica.*

MONDAY, APRIL 23RD:—AFTERNOON, 2 TO 5.

1. What does Macaulay say regarding the three limitations of the early English Kings?

2. In what way was John's reign a blessing to England?

3. What was the character of the English aristocracy?

4. How might the Roundheads have justified their line of action?

5. Criticise Macaulay's method and style.

6. When did Milton write his *Areopagitica?* Why? Explain the title.

7. Milton said he wrote his Areopagitica "ad justx orationis modum." Sketch its plan, and show that Milton followed the divisions of Greek oratory.

8. Note the reasons (briefly) for establishing the freedom of the press.

9. Comment on these phrases and names:—him who went about to impair your merits with a trivial and malignant encomium, thus did Dion Prusaeus, a stranger and a private orator, counsell the Rhodians against a former Edict—his brother *quadragesimal... Vetus Comoedia*—souldierly *ballats* and *roundels*—*Padre Paolo*—Martin the 5 by his Bull—new limbo's —Julian the Apostat—Morgante, an Italian Romanze—marginal Keri—textual chetiv .....for these are the countryman's Arcadia's and his Monte Magors – the fiscu of an Imprimatur.

10. What allusions does Milton make to Bacon, Selden, Henry the 8, Knox?

Spenser:—*Faerie Queene, bk. I.* Dryden:—*Annus Mirabilis, Hind and Panther, Preface to Fables, Absalom and Achitophel.*

FRIDAY, APRIL 27TH:—MORNING, 9 TO 12.30.

Examiner,.....CHAS. E. MOYSE, B.A.

1. From what aspects may *The Faerie Queene* be regarded as typical of its epoch?

2. Give an outline of the Canto of which this is the argument:—

> Her faithfull knight faire Una brings
> To house of Holinesse,
> Where he is taught repentance and
> The way to heavenly blisse.

3. Explain the construction of the Spenserian stanza; write one of the stanzas and show its power. Whence did Spenser take the conceit of human beings turned into trees.

4. What digression does Dryden make concerning shipping and navigation in *Annus Mirabilis?* Notice a few classical constructions and quotations in the poem.

5. How does Dryden described Achitophel and Barzillai? What do you know concerning the career of each.

6. When was the Hind and Panther published? Show its relations to its time.

7. Narrate the two episodes (important) in the Hind and Panther with which you are the most familiar.

8. What fundamental literary ideas of his age are expressed by Dryden in the "Preface."

B. A. EXAMINATION FOR HONOURS IN ENGLISH.

ANGLO-SAXON.

SATURDAY, MARCH 31ST :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Translate:

A. Beowulf Sigon tha to slæpe.....gebnægde helle gast.

Give the principal parts of *sigon*, *angeald*, *gelamp*, *becwom*, *wearth*, *gewat*, *fleon*, *woc*, *fand*, *bidan*. Write philological notes on *swilt*, *ecg-bana*, *mæg*.

B. BEOWULF. Nis thæt feor heonan ... .roderas reotath.

hrimge bearwas: whose emendation? old reading?

C. ÆLFRED. Translation of Gregory's *Cura Pastoralis*. Swæ clæne hio wæs othfeallenu.....feawe tha theawas.

D. CÆDMON. Hwæt sceal ic winnan? cwæth he.....ne wille ic leng his geongra weorthan.

II. Translate at sight:—

A. A. S. CHRON. 1048. Tha com an his mannа.....ac hit næs na swa.

B. CÆDMON. Tha wearth se Mihtiga gebolgen.....on tha sweartan helle.

Write philological notes on feorh, bream, secg, nicker, holm, smith, beaga, earl, eaxle.

TUESDAY, APRIL 3RD :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. What restrictions on printing were authorized during the reign of Elizabeth and during that of Charles the Second?

2. What matters did the Petition of Right embrace?

3. State the leading events of Constitutional History from the meeting of the Long Parliament to the beginning of the Civil War.

4. What was the Ikon Basilike? Why are Sir R. Filmer's writings noteworthy?

5. What measures were passed in the reign of Charles the Second previous to the fall of Clarendon? Briefly note the tenor of each. Of what nature was Clarendon's impeachment?

6. What was the secret Treaty of Dover?

7. Tell the story of the Popish plot.

8. Notice the acts which hastened the Revolution, and give Hallam's opinion on its justice and necessity.

9. Give the substance of Macaulay's description of the court of Charles the Second.

10. Give the substance of Macaulay's description of the Metropolis in the reign of Charles the Second.

Campbell:—*The Pleasures of Hope.* Shelley:—*Cenci.*

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiner,..... .....CHAS. E. MOYSE, B.A.

1. Give a sketch of Thomas Campbell's life prior to the publication of The Pleasures of Hope.

2. Trace the main line of thought in the Pleasures of Hope, and show clearly its relation to its time.

3. Quote some passage from The Pleasures of Hope which you think especially fine.

4. Give the contexts of:—

(*a*) Oh, bloodiest picture in the book of Time.

(*b*) Oh! lives there Heaven! beneath thy dread expanse?

(*c*) Like angel visits, few and far between.

5. Discuss the character of Shelley's poetry as displayed in his longer non-dramatic poems.

6. What is the aim of the Cenci? Briefly unfold the plot.

7. Give the substance of the scene which describes the Banquet at the Cenci Palace.

8. Make a few notes on the characters of Count Cenci, Beatrice, Cardinal Camillo and Orsino.

Buckle:—*Hist. of Civ. in Europe*, vol. i. caps. i. and ii., vol. ii. caps. i. and ii. Matthew Arnold:—*Essays in Criticism.*

WEDNESDAY, APRIL 11TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. What does Buckle allege to be the foundation of the Science of History?

2. What comparisons does Buckle draw between Hindustan, Egypt, Central America, Mexico and Peru?

3. Trace the growth of superstition in Spain to the reign of Philip II.

4. Why are the Spaniards loyal? What was the result of Spanish loyalty previous to 1700?

5. Notice a few of the leading points discussed in Buckle's chapter on Scotland.

6. Discuss the influence of Academies.

7. State another topic set forth by Matthew Arnold in either of his first two essays.

EARLY ENGLISH.

FRIDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A

Translate:—

A. Richard Rolle de Hampole. *Pricke of Conscience*, ll. 1211-1292.

B. Lawrence Minot. *Political Songs.* (C).

C. *The Deluge*, ll. 235-272.

D. *Piers the Plowman.* Passus VII., ll. 234-311.

Comment philologically on five words in each of the extracts.

Tennyson :—*Idylls of the King.*

MONDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. State the locality in which Arthur probably lived and fought; account for his transference to Wessex. Whither did the Arthur story travel and what authors treated it?

2. How were the Arthur legends spiritualized?

3. Show the allegorical significance of Gareth and Lynette, and notice in it Tennyson's departures from old legends; criticise them.

4. Show the *unity* of Tennyson's Arthuriad.

5. Tennyson's aim in the Idylls has been said to be the delineation of types of womanhood; criticise this assertion, and unfold the characters of any *three* of Tennyson's heroines.

6. Quote three short passages from any three Idylls which you think especially fine.

Tennyson :—*In Memoriam.*

WEDNESDAY, APRIL 18TH :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, A.B.

Elucidate, as fully as time will allow, the following points in regard to *In Memoriam :*

(*a*) Its resemblance to *Lycidas* and *Adonais.*

(*b*) Its structure, with reference to its continuity of thought.

(*c*) The finer threads of argument in any *one* of its major divisions.

(*d*) Its right to be considered *the* representative poem of the nineteenth century.

(*e*) Quote to substantiate your more important statements.

Pope :—*Essay on Criticism; Essay on Man; Moral Essays.*

MONDAY, APRIL 23RD :—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Show the relation of the *Essay on Criticism* to its time.

2. Mention *briefly* the more important topics discussed in the *Essay on Criticism*. Continue these arguments:

A little learning is a dangerous thing.
But most by numbers judge a Poet's song.

3. Examine the philosophy of the *Essay on Man*.

4. Trace the line of argument in any one of the Epistles of the *Essay on Man*. Quote six disconnected lines which you think especially good from the Epistle you have chosen.

5. What does Pope say about the Ruling Passion in his *Moral Essays?*

6. Notice some of Pope's beliefs in regard to the characters of Women and criticise them, as a whole, with reference to the age when they were written.

Cowper:—*The Task.*

WEDNESDAY, APRIL 25TH:—MORNING, 9 TO 12.

1. What is Cowper's position in English Literature?

2. How far is that position illustrated by *The Task?*

3. What reference is made to Wolfe? to Chatham? What "picked the Jewel out of England's crown?"

4. The virtues of Discipline? what has taken its place?

5. "I sum up half mankind,
And add two-thirds of the remaining half,
And find the total of their hopes and fears
Dreams, empty dreams."
How are the dreamers employed?

6. "Now stir the fire and close the shutters fast."
Express either in the poet's words or your own the thoughts of the ensuing section.

7. How does Cowper touch on the Bastille?

8. Give the Argument of *The Winter Walk at Noon.*

Shakespeare:—*Love's Labours Lost; A Midsummer Night's Dream; Hamlet.*

FRIDAY, APRIL 27TH:—MORNING, 9 TO 12.30.

Examiner,.....CHAS. E. MOYSE, B.A.

N.B.—Quote when it seems fitting to do so.

1. What evidences of dramatic youth appear in Love's Labours Lost?

2. Examine the construction (not the plot) of A Midsummer Night's Dream, and discuss Shakespeare's use of the supernatural both in this play and elsewhere.

3. Show that A Midsummer Night's Dream has ethical significance, and point out some of its more delicate beauties.

4. Notice stock criticisms of *Hamlet*, and give in some detail your opinions on the leading features of the play.

5. Take male or female characters from the three plays (one from each) and use them to show Shakespeare's advance in the knowledge of humanity.

LOGIC AND MENTAL AND MORAL PHILOSOPHY.

INTERMEDIATE EXAMINATION.

JEVONS' LOGIC.

THURSDAY, 19TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. In the following sentence select the terms, stating whether they are general or singular, concrete or abstract:—

"Not once or twice in our fair island-story
The path of duty was the way to glory."

2. (*a*) Distinguish the two meanings of a term in extension and in intension. (*b*) Illustrate the general law of the relation between the two.

3. Give the subject, predicate, and copula of the proposition in question 1.

4. (*a*) What are the symbols *A*, *E*, *I*, and *O*, respectively, used to represent? (*b*) Give an example of each.

5. "All just acts are expedient." If this proposition be true, state what inference may be drawn with regard to each of the following:—

(*a*) Some just acts are expedient;
(*b*) Some just acts are not expedient;
(*c*) No just acts are expedient;
(*d*) Some expedient acts are just;
(*e*) None but expedient acts are just.

6. Distinguish the several terms and propositions in the following syllogism: "Inasmuch as the whale is mammalian, it is not a fish, for no fish is mammalian."

7. Name the mood and the figure of the syllogism given in the previous question, and reduce it to the first figure.

8. Define each of the terms:—Enthymeme, Prosyllogism, Episyllogism Epicheirema, Sorites.

9. State whether, and why, any of the following arguments are illegitimate:—

(*a*) The ground must be wet, if rain has fallen; but as no rain has fallen, the ground is not wet.

(*b*) Inasmuch as this man is not fit for work, he must be in ill health, for if he is in ill health, he is not fit for work.

(*c*) If light consisted of material particles, it would possess momentum; but it cannot consist of material particles, as it does not possess momentum.

10. Explain the nature of each of the following fallacies:—

(*a*) The works of Shakespeare cannot be read in a day. Hamlet is a work of Shakespeare, and cannot therefore be read in a day.

(*b*) Hard times are always followed by prosperity, and therefore they are its cause.

(*c*) Mathematical studies improve the mind; but as literature is not a mathematical study, it does not improve the mind.

11. Distinguish (*a*) Deduction and Induction, (*b*) Perfect and Imperfect Induction. (*c*) Why cannot Inductions in physical science attain the same absolute certainty as in mathematical science?

12. Explain, and illustrate by an example, any one of the Methods of Induction.

THIRD YEAR.

(ADDITIONAL IN MENTAL AND MORAL PHILOSOPHY.)

HAMILTON'S PHILOSOPHY AND MILL'S LOGIC (BOOKS I.-III).

MONDAY, 9TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Distinguish two points of view, under which the deliverances of consciousness may be considered. (*b*) Under which of these alone is doubt possible? (*c*) Explain the reason.

2. Explain the general principle of Hamilton's classification of the qualities of matter.

3. State the Primary Laws of Reproduction.

4. State Hamilton's theory of the *Primum Cognitum*, distinguishing it from others.

5. (*a*) Deduce the Law of Causality from the Law of the Conditioned, and (*b*) explain how Hamilton applies this deduction to vindicate the reality of moral freedom.

6. State Hamilton's theory of Pleasure and Pain.

7. (*a*) State Mill's theory of the Import of Propositions, mentioning other theories which he rejects. (*b*) Distinguish between the logical and the psychological aspects of this question.

8. State and criticise Mill's theory on the nature of Inference.

9. State the question at issue between Mill and Spencer on the Universal Postulate.

10. State the Joint Method of Agreement and Difference, giving an example of its application.

11. Explain the Deductive Method.

12. Distinguish the different modes of explaining the laws of nature.

THIRD YEAR.

(HONOURS IN MENTAL AND MORAL PHILOSOPHY.)

TUESDAY, 24TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

I. BERKELEY'S PRINCIPLES OF HUMAN KNOWLEDGE.

1. (*a*) Give Berkeley's classification of Ideas, that is, the objects of human knowledge. (*b*) What is there implied in knowledge besides these ideas or objects?

2. "The *esse* of sensible things is *percipi*." Explain this statement.

3. Explain fully Berkeley's doctrine of Causation and the Laws of Nature.

4. Give Berkeley's answers to the two objections against his doctrine, (*a*) that "all that is real and substantial is banished out of the world," (*b*) that "things are every moment annihilated and created anew."

5. Take any of the facts of Natural Philosophy discussed by Berkeley, and explain it on his principles.

II. THOMSON'S OUTLINE OF THE LAWS OF THOUGHT.

1. (*a*) Define language both in its most general and in its more limited acceptation; and (*b*) distinguish its four functions.

2. Compare the Table of Judgments in ordinary logical text-books with those of Thomson and of Sir W. Hamilton.

3. Explain how the doctrine of Opposition is affected by the additional propositions which Thomson recognises.

4. Explain any two modes of Immediate Inference besides Opposition and Conversion, illustrating by an example of each.

5. On what grounds does Thomson maintain the First Figure to be the most natural, while the Second and Third are not to be rearded as, arbitrary subtleties?

6. Explain either Hamilton's or Euler's system of syllogistic notation nplemtex

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B.A. ORDINARY EXAMINATION.

CALDERWOOD'S HANDBOOK OF MORAL PHILOSOPHY.

WEDNESDAY, APRIL 4TH :—MORNING, 9 TO 12.

Examiner,..... .....J. CLARK MURRAY, LL.D.

1. What constitutes an action moral ?

2. (*a*) State the theory of a Moral Sense, naming philosophers by whom it was held. (*b*) Criticise this theory, showing that the knowledge of the moral quality of actions is of the nature of a judgment.

3. (*a*) Distinguish Conscience and Consciousness. (*b*) What is meant by the *authority* of conscience ? (*c*) Explain what Calderwood means by saying that "conscience is a faculty which, from its very nature, cannot be educated."

4. Distinguish Perfect and Imperfect Obligation, explaining (*a*) the ethical, (*b*) the juridical, (*c*) the transcendental, use of the distinction.

5. Give a detailed exposition of Utilitarianism.

6. State Bain's theory of the development of conscience.

7. Explain the relation of the Will (*a*) to Intelligence, (*b*) to Affections and Desires.

8. Explain the theory of Necessitarianism.

9. Distinguish Theism, Atheism, Pantheism and Polytheism.

B. A. ORDINARY EXAMINATION.

ROGERS' MANUAL OF POLITICAL ECONOMY.

THURSDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Distinguish value in use and value in exchange. (*b*) Show that the latter is determined by the cost of production.

2. (*a*) Distinguish value and price. (*b*) Show that there can be no general rise or fall in values.

3. Explain why gold and silver are commonly used for money.

4. Under what three heads may the price of products be distributed?

5. By what causes are the wages of labour determined?

6. Mention some of the schemes suggested for the elevation of labour.

7. (*a*) Distinguish different systems of tenancy in land. (*b*) Explain the condition of the Irish peasantry under their system.

8. Explain the effect of an inconvertible paper currency.

9. State the rules of taxation laid down by Adam Smith.

10. (*a*) State the arguments for and against indirect taxation. (*b*) Mention the principal forms of direct taxation.

B. A. ORDINARY EXAMINATION.

(ADDITIONAL IN MENTAL AND MORAL PHILOSOPHY)

LORIMER'S INSTITUTES OF LAW.

TUESDAY, APRIL 24TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish the different schools of Jurisprudence.

2. "All human laws are, properly speaking, only declaratory." Explain this proposition, and illustrate it by the statement, that Law cannot alter the relations of persons or the price of commodity.

3. State some of the meanings in which the distinction between Perfect and Imperfect Obligations has been held, and show how it originated the Negative Schools of Jurisprudence.

4. Wherein do Jurisprudence and Ethics coincide; wherein do they differ.

5. Explain the relation of Liberty (*a*) to Order, (*b*) to Equality.

6. (*a*) Distinguish the Primary and the Secondary Sources of Positive Law; and (*b*) sketch in general outline the latter.

7. Distinguish (*a*) the Ultimate and the Proximate, (*b*) the Primary and the Secondary, Objects of Positive Law.

6. State the Roman division of Law.

B A. ORDINARY EXAMINATION.

(ADDITIONAL IN MENTAL AND MORAL PHILOSOPHY)

MODERN PHILOSOPHY.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Sketch, in outline, the epochs in the development of modern philosophy distinguished in the Lectures.

2. State what you know of any three of the following writers:—Petrus Ramus, Giordano Bruno, Jacob Boehme, Gassendi, Condillac, Bonnet, Helvetius.

3. Explain the philosophical doctrines associated specially with the names of Geulincx and Malebranche.

4. (*a*) What is the object of the negative part of Locke's Essay? (*b*) State the leading results of the positive part.

5. Sketch the development of Locke's Empiricism into the Scepticism of Hume with regard to substantiality and causality.

6. Give an outline of Berkeley's Idealism.

7. Describe the German Illumination, and mention some of writers epresenting the movement.

8. Explain the relation of Kant's three Critiques.

B.A. HONOURS IN MENTAL AND MORAL PHYLOSOPHY.

MILL'S LOGIC.

FRIDAY, 6TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY.

1. Compare Mill's doctrine of Categories with the doctrines of Aristotle and of Kant.

2. Explain and discuss Mill's doctrine with regard to the nature of Reasoning.

3. Explain Mill's definition of a Cause.

4. State and illustrate by an example any one of the Methods of Experimental Inquiry.

5. (*a*) To what investigations are the Experimental Methods inapplicable? (*b*) Explain the methods which must be adopted in these.

6. State fully the requisites of a philosophical language.

7. "The principles of Ethology are properly the *axiomata media* of the science of mind." Explain this statement.

8. Explain the Inverse Deductive or the Historical Method of studying Social Science.

ARISTOTLE'S NICOMACHEAN ETHICS.

MONDAY, 9TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Define τὸ ἀγαθόν. (*b*) Of what science is it the end?

2. Distinguish ἐνέργεια and ἔργον.

3. Explain and illustrate Aristotle's definition of virtue.

4. Explain his twofold division of the virtues.

5. Define προαίρεσις, and show what may, and what may not, be its object.

6. In what sense is justice the whole, in what is it merely a part, of virtue?

7. Distinguish the two kinds of partial justice, explaining the distinction by Aristotle's illustration of the difference between geometrical and arithmetical proportion.

8. Distinguish the five kinds of intellectual virtues.

9. Distinguish the different kinds of friendship.

10. Distinguish the different *πολιτεῖαι*, and the corruptions to which they respectively tend.

11. State (*a*) the arguments by which Eudoxus supports his theory of *τὸ ἀγαθόν*, (*b*) Plato's objections to the theory, (*c*) Aristotle's criticism of the objections.

12. Explain the conclusion of the Ethics with regard to the nature of the most perfect happiness.

DESCARTES' METHOD AND MEDITATIONS.

AND

SPINOZA'S ETHICS.

MONDAY, 16TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain precisely what Descartes enjoins as an indispensable preliminary to the investigation of truth.

2. What is the one absolutely indubitable fact, according to Descartes?

3. Explain the method by which, from this fact, he derives a general criterion of certainty.

4. State his theory of error.

5. What, according to him, constitutes the essence of material things?

6. Describe (*a*) the method of Spinoza's Ethics, (*b*) the subjects of the several parts.

7. State his definitions of Substantia, Attributum, Modus.

8. Explain the expressions, Natura naturans and Natura naturata, as interpreted by Spinoza.

9. Explain the difference between the three kinds of knowledge distinguished by Spinoza.

10. "Mentis actiones ex solis ideis adaequatis oriuntur; passiones autem a solis inadaequatis pendent." Explain this proposition.

11. State Spinoza's definitions of Bonum, Malum, Virtus.

12. Explain his conception of Summum Bonum.

SPENCER'S FIRST PRINCIPLES.

WEDNESDAY, 18TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain Spencer's doctrine of the Relativity of Human Knowledge.

2. How does Spencer propose to reconcile Religion and Science?

3. Give Spencer's definition of Philosophy.

4. Illustrate the law of the Direction of Motion by facts drawn from inorganic, organic, mental, and social, phenomena.

5. Show that there is a law of Rhythm in Motion, deducible from the Persistence of Force.

6. Distinguish (*a*) Evolution and Dissolution, (*b*) Simple and Compound Evolution.

7. Explain the Law of Evolution in its complete formula.

8. Show that there is a Rhythm, not only in the particular changes of the Universe, but also in the totality of its changes.

CICERO'S DE NATURA DEORUM

AND

ANCIENT PHILOSOPHY.

THURSDAY, 26TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Sketch the general plan of Cicero's dialogue, mentioning the different speakers, and the part taken by each.

2. Explain the terms *πρόληψις* and *ἰσονομία* in connection with the doctrines represented by each.

3. "In hac quaestione plerique deos esse dixerunt; dubitare se Proagoras: nullos esse omnino Diagoras Melius et Theodorus Cyrenaicus putaverunt." Tell what you know of the philosophers mentioned in this passage.

4. State the four heads of the Stoical argument in the Second Book of the *De Natura Deorum*, and sketch specially the three arguments in favour of the divine *πρόνοια*.

5. What was the Stoical theory with regard to the plurality of gods?

6. Name the principal schools of philosophy prior to Socrates, and state the distinctive doctrine of each.

7. Connect the schools of the Imperfect Socratics with the teachings of Socrates himself.

8. Give an outline either of the Dialectic or of the Ethics of Plato.

9. Explain the origin of the terms, Eleatic, Cyrenaic, Academy, Lyceum, Peripatetic, Stoic.

10. Give an outline either of the Metaphysics or of the Physics of Aristotle.

MAINE'S ANCIENT LAW.

FRIDAY, 20TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Describe the jural condition of primitive society as illustrated by the Homeric conception of *Themistes*.

2. Explain the nature of each of the three agencies by which law is brought into harmony with society.

3. (*a*) State the origin of the early Roman *Jus Gentium*. (*b*) Sketch, in general outline, the development of this into the later Roman conception of a Law of Nature. (*c*) Notice modern modifications of this conception.

4. Explain the nature and the origin of the Patria Potestas.

5. (*a*) Distinguish *Cognati* and *Agnati*. (*b*) Point out the connection of the distinction with the circumstances of early Roman society.

6. Mention some of the leading facts in the early history of Testamentary Law.

7. "The popular impression in reference to the part played by Occupancy in the early history of civilization directly reverses the truth." Explain this statement in its bearing on the primitive origin of Property.

.8 Explain the late origin of a Law of Contract, and the gradual extension of its sphere with the development of society.

9. What was (*a*) the early confusion between Crime and Wrong, (*b*) its effect on Criminal Jurisprudence?

MODERN LANGUAGES AND HEBREW.

FRENCH.

FIRST YEAR.

FRIDAY, APRIL 6TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. Translate into English :

Toinette. Les voilà avec un notaire, et j'ai ouï parler de testament. Votre belle-mère ne s'endort (*a*) point : et c'est sans doute quelque conpiration, où (*b*) elle pousse votre père.

Angélique. Qu'il dispose de son bien à sa fantaisie, pourvu qu'il ne dispose point de mon cœur. Tu vois (*c*), Toinette les desseins (*d*) violents que l'on (*e*) fait sur lui. Ne m'abandonne point, je te prie, dans l'extrémité où je suis.

Toinette. Moi, vous abandonner! J'aimerais mieux mourir. Votre belle-mère (*f*) a beau me faire sa confidente, et me vouloir jeter dans ses intérêts, je n'ai jamais pu (*g*) avoir d'inclination pour elle ; et j'ai toujours été de votre parti. Laissez-moi faire ; j'emploierai (*h*) toute chose pour vous servir.

Le Malade Imaginaire A. 1 *Se X.*

2. *a.* What kind of verbe is *s'endort?* What tense is it in ?

c. g. Answer the same questions for *vois* and *ai pu.*

Write those verbs in the *Preterite definite*, *Present of the Subjunctive*, *Future*, and *Pluperfect of the Subjunctive.*

Write the same tenses of the verbes *naître* and *vivre.*

h. What is the infinitive of *emploierai?* How do you account for the presence of *i* in the middle of that verb ? Give the rule.

e. c. Parse *l'* and *où.*

d. What is the homonyme of *desseins?* What is its meaning ?

f. What are the two words by which the word *belle-mère* is translated into English ? What is the plural of that word ? Give the rule. Give an exception to that rule.

3. Give two instances, with examples, when the article is used in French and not in English ; and *vice versa*.

4. What adjectives are *always* placed before the nouns, and what are those which are always placed after? Give two examples of each.

5. Translate into French :

It is a mere evasion for the thing is public. The hay-market is on your left, and the horse-fair is before you. Take the coffee cups into the dining-room. Rainbows are formed by the reflection of the rays of the sun in the clouds. Ciceros and Virgils will always be scarce. Nobody is more unhappy than a miser. What wicked people? Military men wear crape round their arm. My vine wants cutting. We must pity the unfortunate I do not know who is in the wrong. Study presents so many advantages that one cannot give himself to it with too much ardour.

INTERMEDIATE EXAMINATION.

FRIDAY, APRIL 6TH :—MORNING, 9 TO 12.

Examiners,..... { P. J. DAREY, M.A., B.C.L. / PROF. M. MILLER.

A.

1. Translate into English :

Madame, avant que de partir,
J'ai cru de votre sort vous devoir avertir.
Mon père ne vit plus. Ma juste défiance
Présageait les raisons de sa trop longue absence :
La mort seule, bornant ses travaux éclatants,
Pouvait à l'univers le cacher si longtemps.
Les dieux livrent enfin à la parque homicide
L'ami, le compagnon, le successeur d'Alcide.
Je crois que votre haine, épargnant ses vertus,
Ecoute sans regret ces noms qui lui sont dus.
Un espoir adoucit ma tristesse mortelle :
Je puis vous affranchir d'une austère tutelle ;
Je révoque les lois dont j'ai plaint la rigueur.

Racine. Phèdre II., 2.

2. Name the irregular verbs in the preceding extract. Give their primitive tenses. Write the conjugation of these verbs in the pres. ind. and in the imp. subj.

3. Name the two principal reunions which were formed to cultivate the French language and literature. The founders of these reunions. The means by which they tried to attain their ends.

4. Translate into French :

That no time might be lost, as they expected that the proposal would not be refused, they immediately began their journey to the monastery, and, when they arrived, Imlac went forward with the former messenger to the Arab's fortress. Rasselas was desirous to go with them ; but neither his sister nor Imlac would consent. The Arab, according to the custom of his nation, observed the laws of hospitality with great exactness to those who put themselves in his power, and, in a few days, brought Pekuah with her maids, by easy journeys, to the place appointed, where, receiving the stipulated price, he restored her with great respect to liberty and her friends.

Johnson. Rasselas 37.

B.

1. Compare the XVIth Century with the XVIIth at the Literary and Political point of view.

2. Give the names of the eight greatest writers of the XVIth Century, and mention some of their works.

3. When did Fénelon, Commines, Du Bartas Joinville, Pascal, Rotrou, and Saurin live ? What books did they write ?

4. Who wrote the life of *Louis IX.*, the *Prise de Constantinople, l'Histoire Universelle*, les *Caractères, les Maximes.* When were those books written ?

5. Write as complete a history of Phèdre, the wife of Thésée, as you can.

6. Why is *dus* in the above extract from *Phèdre* so written ? Who was *Alcide ?* What is the etymology of the word parque ? Why ?

7. Who speaks in the above extract ? To whom ?

8. What *austère tutelle*, and what *lois* is it spoken of in said extract ?

THIRD YEAR.

WEDNESDAY, APRIL 18TH :—MORNING 9 TO 12.

Examiner, ... P. J. DAREY, M.A.

1. Donnez une analyse de la tragédie de Corneille. *Horace.* Qu'est-ce que Corneille a voulu peindre ? Quels sont les plus beaux rôles de cette pièce ? Quelle est cette expression sublime qu'on trouve dans cette tragédie ?

2. Quelles sont les meilleures pièces de Corneille ?

3 .Traduisez en anglais :

Armez-vous de constance, et montrez-vous ma sœur ;
Et si par mon trépas il (*a*) retourne vainqueur,
Ne le recevez point en meurtrier d'un frère
Mais en homme d'honneur qui fait ce qu'il doit faire,
Qui sert (*b*) bien son pays, et sait montrer à tous,
Par sa haute vertu qu'il est digne de vous.
Comme si je vivais, achevez l'hyménée :
Mais si ce fer aussi tranche (*c*) sa destinée,
Faites à ma victoire un pareil traitement,
Ne me reprochez point la mort d'un amant,
Vos larmes vont couler, et votre cœur se presse.
Consumez (*d*) avec lui toute cette faiblesse,
Querellez ciel et terre, (*e*) et maudissez le sort ;
Mais après le combat ne pensez plus au mort.

4. Qui est-ce qui parle dans le morçeau ci-desssus ? A qui ?

5 (*a*) A qui se rapporte le pronom *il ?*

(*b*) Quelle différence y a-t-il entre la signification de ce verbe employé comme verbe actif et employé comme verbe pronominal ?

(*c*) Expliquez toute la force du mot tranche. Que veut-il dire lorsque c'est un nom ? quel autre nom est dérivé de celui-ci ?

(*d*) Etablissez la différence qu'il y a entre *consumer* et *consommer.*

(*e*) Expliquez cette expression querellez *ciel et terre.*

6 Nommez les trois écrivains théocratiques les plus distingués du temps de l empire ? Quels sont leurs principaux ouvrages?

7. Faites connaître les principaux orateurs et écrivains politiques du commencement de ce siècle.

8. Traduisez en français :

In the morning early, I called out my whole family to help at saving an after-growth of hay ; and our guest offering his assistance, he was accepted among the number. Our labours went on lightly ; we turned the wath to the wind. I went foremost, and the rest followed in due succession. I could not avoid, however, observing the assiduity of Mr. Burchell in assisting my daughter Sophia in her part of the task. When he had finished his own, he would join in hers and enter into close con versation ; but I had too good an opinion of Sophia's understanding, and was too well convinced of her ambition to be under any uneasiness from a man of broken fortune.

The Vicar of Wakefield.

THIRD YEAR.

ADDITIONAL DEPARTMENT.)

SATURDAY, APRIL 7TH :—9 TO 12.

Examiner,.....P. J. DAREY, M.A.

1. Traduisez en anglais :

Un jour sur ses longs pieds, allait je ne sais où
Le héron au long bec emmanché d'un long cou :
Il cotoyait une rivière.
L'onde était transparente ainsi qu'aux plus beaux jours ;
Ma commère la carpe y faisait mille tours
Avec le brochet son compère.
Le héron en eût fait aisément son profit.
Tous approchaient du bord ; l'oiseau n'avait qu'à prendre,
Mais il crut mieux faire d'attendre
Qu'il eût un peu plus d'appétit :
Il vivait de régime et mangeait à ses heures.

La Fontaine, les Fables, Livre VII, IV.

2. Quand est-ce que vivait LaFontaine ? Comment est-il considéré comme écrivain ? A-t-il publié autre chose excepté des Fables ? Où a-t-il puisé le sujet de ses Fables ?

3. Traduisez en anglais :

Oh ! l'estime publique ! elle est vers (*a*) les écus ;
Elle suit le succès et quitte les vaincus.
Qu'un homme soit (*b*) sans foi, trahisse sa parole
S'enrichisse aux dépens des gens qu'il vole ;
Qu'habile à manier des chiffres imposteurs,
Il soit le plus fripon des grands spéculateurs,
Il se retire enfin, trois fois millionnaire
Tandis que l'hôpital s'ouvre à l'actionnaire
Il est riche, il reçoit, ses dîners sont vantés ;
Il suffit.

4. (*a*) Donnez quatre homonymes de *vers*.

(*b*) Pourquoi ces verbes *soit*, *trahisse*, *s'enrichisse* sont-ils à ce mode ?

5. Dites ce que vous savez sur la fondation de l'Académie Française Quels sont les deux faits les plus mémorables de l'Académie Française au XVIIe siècle ?

6. Qui était Furetière ? Par quoi est-il connu ?

7. Quels sont les moralistes du XVIIe siècle ? Quels ouvrages ont-ils produits ?

8. Qui étaient Diderot et d'Alembert? Quels sont leurs principaux ouvrages?

9. Donnez le jugement de Paul Albert sur Voltaire.

10. Traduisez en Français :

Our family had now made several attempts to be fine; but some unforeseen disaster demolished each one as soon as projected. I endeavoured to take the advantage of every disappointment, to improve their good sense, in proportion as they were frustrated in ambition. "You see, my children," cried I, "how little is to be got by attempts to impose upon the world, in coping with our betters. Such as are poor, and will associate with none but the rich, are hated by those they avoid, and despised by those they follow. Unequal combination, are always disadvantageous to the weaker, side; the rich having the pleasure, and the poor the inconveniences, that result from them. But come, Dick, my boy, and repeat the fable you were reading to-day, for the good of the company."

The Vicar of Wakefield, Chap. XIII.

THIRD YEAR.

(HONOUR EXAMINATION)

WEDNESDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. D'où le sujet de la tragédie de *Phèdre* a-t-il été tiré? Quelles sont les critiques que l'on fait de cette tragédie? Comment fut-elle accueillie par le public? Racontez le dénouement de cette tragédie.

2. A quelle occasion Racine a-t-il composé la comédie des *Plaideurs?* Qu'est-ce qu'il a voulu tourner en ridicule dans cette comédie? Pourquoi a-t-il placé la scène des *Plaideurs* dans une ville de Basse Normandie?

3. Dites de quoi traite le troisième chant de l'Art Poétique.—Expliquez de quelle carrière il parle lorsqu'il dit;

"Courez du bel esprit la carrière épineuse."

Boileau a-t-il eu raison de dire:—

"Et (Marot) montra pour rimer des chemins tout nouveaux."

Prouvez votre réponse.

Quels sont les conseils que donne Boileau aux jeunes écrivains dans son Art Poétique?

Citez quelques vers à l'appui de votre réponse.

4. Qu'est-ce que les *Pensées* de Pascal? Quelle est l'idée fondamentale des *Pensées?* citez-en quelques-unes.

Où La Bruyère vécut-il? Faites connaître ses *Caractères.*

6. Traduisez par leurs équivalents en anglais les expressions suivantes tirées des Plaideurs: Tout Picard que j'étais un bon apôtre. On n'entrait point chez moi sans graisser le marteau. Voilà mes guichetiers en défaut. Et si dans la province il se donnait en tout vingt coups de nerf de bœuf, mon père pour sa part en emboursait dix-neuf. Il viendra me demander peut-être un grand homme sec, là, qui me sert de témoin. Donnant dans le panneau. Le père aura l'exploit, la fille le poulet.

7. Combien y a-t-il de langues néo-latines?

8. Comment s'est opéré l'altération de la langue latine?

9. Qu'est-ce qu'on a appelé langue Romane? Qui est-ce qui en a proclamé l'existence?

10. Dans quelles langues ne trouve-t-on pas l'article? Et dans lesquelles le trouve-t-on? Où est-il nécessaire? Et où est-il inutile? D'où notre article vient-il?

11. Traduisez en Anglais:

Rodolphe.—Tiens (1); je vais m'expliquer d'une façon plus nette:
Toi-même, tu parais un garçon fort honnête!
George. Moi! *Rodolphe.* Ton cœur est loyal et plein d'élans généreux;
L'honneur trouve chez (2) toi des accents chaleureux;
La lâcheté t'irrite; un noble trait t'enflamme;
Tu n'épargnes alors l'éloge, ni le blâme;
Enfin je te connais par plus d'un (3) beau côté,
—Et je ne suis pourtant pas sûr de ta probité.
George. Qu'est-ce à dire?
Rodolphe. Eh mon Dieu! je n'en ai pas la preuve.
Tu n'es jamais sorti triomphant d'une épreuve.
Tu crois en ta vertu; mais pour avoir ce droit,
As-tu jamais souffert de la faim et du froid?
Sais-tu, pendant les nuits où (4) le souci l'éveille,
Tout ce qu'à l'indigent le désespoir conseille?
A ton chevet fiévreux, as-tu vu comme lui
Un démon te montrer l'opulence d'autrui,
Puis, en regard mettant ta misérable vie,
Dans ton âme ulcérée introduire l'envie?

L'Honneur et l'Argent, A 1, *Sc. III.*

1. Analysez *tiens.* Par quoi faut-il le traduire ici?

2. Quelle est l'étymologie de *chez?* Que signifie-t-il ordinairement? Que veut-il dire ici?

3. Quelle différence y a-t-il entre *plus d'un* et *plus qu'un?*

4. Analysez *où*.

12. Traduisez en français :

We were now prevented from further conversation by the arrival of the jailer's servants, who came to call over the prisoners' names and lock up for the night. A fellow also with a bundle of straw for my bed attended who led me along a dark, narrow passage into a room paved like the common prison, and in one corner of this I spread my bed, and the clothes given me by my fellow prisoner; which done, my conductor, who was civil enough, bade me a good night. After my usual meditations, and having praised my heavenly Corrector, I laid myself down, and slept with the utmost tranquillity till morning.

The Vicar of Wakefield, Ch. XXV.

B. A. ORDINARY EXAMINATION.

MONDAY, APRIL 23RD :—MORNING 9 TO 12.

Examiners, ... { P. J. DAREY, M.A., PROF. M. MILLER.

1. Traduisez en anglais :—

Camille. Rome, l'unique objet de mon ressentiment !
Rome, à qui vient ton bras d'immoler mon amant !
Rome qui t'a vu naître, et que ton cœur adore !
Rome enfin que je hais parce qu'elle t'honore !
Puissent tous ses voisins ensemble conjurés
Saper ses fondements encore mal assurés !
Et, si ce n'est assez de toute l'Italie,
Que l'Orient contre elle à l'Occident s'allie,
Que cent peuples unis des bouts de l'univers
Passent pour la détruire et les monts et les mers !
Qu'elle-même sur soi renverse ses murailles,
Et des ses propres mains déchire ses entrailles !

Corneille, Horare IV, 5.

2. *a* Voici venir ma sœur.—Comment expliquez-vous l'infinitif *venir ?*

b. Je vais résoudre mon âme.—Dans quel sens devrons-nous prendre le verbe *résoudre ?*

c. Allez, ne m'aimez plus, ne versez plus de larmes,
Ou j'oppose l'offense à de si fortes armes.

Traduisez et expliquez le mot *offence*.

d. C'est vous le le sang) dérober qu'autrement le répandre. Expliquez le mot *que*, et traduisez le vers.

3. Qui est le père de l'art dramatique en France ? Qui étaient ses prédécesseurs ? Nommez ses chefs-d'œuvre. Quel est le sujet d'Horace ? Ses beautés, ses défauts.

4. Traduisez en français :

Orl. I prithee, who doth time trot withat

Ros. Marry, he trots hard with a young maid between the contract of her marriage and the day it is solemnized : if he nterim be but a se'nnight, Time's pace is so hard that it seems the length of seven years.

Orl. Who ambles time withal ?

Ros. With a priest that lacks Latin, and a rich man that hath not the gout ; for the one sleeps easily, because he cannot study, and the other lives merrily, because he feels no pain : the one lacking the burden of lean and wasteful learning, the other knowing no burden of heavy, tedious penury.

Shakespeare, As you like it, III, 2

5. Qui est ce qui a écrit les *Caractères*, l'*Institution Chrétienne*, la *Vie de Charles V.* Les *Pensées*, les *Maximes ?* Dites dans quel siècle ces ouvrages ont-ils été écrits.

6. Quels étaient les trois fameux professeurs qui enseignaient en même temps à la Sorbonne vers 1830 ? Nommez les ouvrages des ces écrivains distingués.

7. Qu'est-ce que les *Faux bons hommes ?* Donnez une analyse de cette pièce.

B. A. ORDINARY EXAMINATION.

(ADDITIONAL DEPARTMENT)

FRIDAY, APRIL 20TH :—9 TO 12.

Examiners,..... { P. J. DAREY, M.A., PROF. M. MILLER.

1. Traduisez en anglais :

Et cependant l'homme a besoin de fêtes qui détendent son esprit, reposent son corps, épanouissent son âme. Ne peut-il donc les rencontrer en dehors des joies grossières ? Les économistes cherchent depuis longtemps le meilleur emploi de l'actitité du genre humain. Ah ! si je pouvais seulement découvrir le meilleur emploi de ses loisirs ! On ne manquera point de lui trouver des labeurs ; qui lui trouvera des délassements ? Le travail fournit le pain de chaque jour, mais c'est la gaité qui lui donne de la saveur. O philosophes, mettez-vous en quête du plaisir ! trouvez-nous des divertissements sans brutalité, des jouissances sans égoïsme ; inventez enfin un carnaval qui soit plaisant à tout le monde et qui ne fasse honte à personne.

E. Souvestre. Un Philosophe sous les toits, II.

2. En combien de périodes peut se diviser le mouvement littéraire en France pendant le dix-neuvième siècle ? Quel est le caractère de la littérature française du premier empire ? Indiquez-en les causes. Quel département de la littérature en a souffert le plus et pourquoi ?

Nommez les chefs-d'œuvres de Xavier de Maistre, de Mme. de Staël, de Chateaubriand, de Lamartime, de Victor Hugo.

3. Traduisez en anglais :—

Il faut parmi le monde une vertu traitable ;
A force de sagesse on peut être blâmable ;
La parfaite raison fuit toute extrémité,
Et veut que l'on soit sage avec sobriété.
Cette grande raideur des vertus des vieux âges
Heurte trop contre notre siècle et les communs usages ;
Elle veut aux mortels trop de perfection ;
Il faut fléchir au temps sans obstination ;
Et c'est une folie à nulle autre seconde
De vouloir se mêler de corriger le monde.

A quel auteur appartiennent ces paroles ? De laquelle de ses comédies sont-elles prises ? Qui est-ce qui les prononce ? Contre qui ? Dans que but ?

4. Quelles étaient les trois langues parlées en Gaule du temps de Charlemagne ?

5. Qu'est-ce que vous appelez accent *tonique* en français ? où se place-t-il ?

6. Quand la déclinaison disparut-elle en français ?

7. Quelles sont les exagérations contre lesquelles la langue française eut à lutter au XVI siècle ?

8. Dites tout ce que vous savez de Malherbe.

9. Traduisez en français :—

Honored Sir :

I have called off my imagination a few moments from the pleasures that surround me to fix it upon objects that are still more pleasing—the dear little fire side at home. My fancy draws that harmless group as listening to every line of this with great composure. I view those faces with delight which never felt the deforming hand of ambition or distress.

The Vicar of Wakefield.

GERMAN.

FIRST YEAR.

MONDAY, APRIL 23RD:—MORNING, 9 TO 1.

Examiner,.....C. F. A. MARKGRAF, M.A.

1. Translate into English:—

(A) Eines Morgens, als er von Neuem seines Bildes sich freuen wollte, fand er, daß sein Meister das ganze Gemälde ausgelöscht hatte. Zürnend und weinend rannte er zu ihm und fragte nach der Ursache des grausamen Verfahrens.

Der Meister antwortete: „Ich habe es mit weisem Bedacht gethan. Das Gemälde war gut; aber es war zugleich dein Verderben."

„Wie so?" fragte der junge Künstler.

„Lieber," antwortete der Meister, „du liebtest nicht mehr die Kunst in deinem Bilde, sondern nur dich selbst. Glaube mir, es war nicht vollendet, wenn es auch uns so schien; es war nur eine Studie.—Da, nimm den Pinsel und siehe, was du von Neuem erschaffest! Laß dich das Opfer nicht gereuen. Das Große muß in dir sein, ehe du es auf die Leinwand zu bringen vermagst."

From Krummacher's „Der Maler und sein Meister.

(B) „Seht mein Land in üpp'ger Fülle,"
Sprach der Kurfürst von dem Rhein,
„Goldne Saaten in den Thälern,
Auf den Bergen edlen Wein!"
„Große Städte, reiche Klöster,"
Ludwig, Herr zu Baiern, sprach
„Schaffen, daß mein Land den euren
Wohl nicht steht an Schätzen nach."
Eberhard, der mit dem Barte,
Würtemberg's geliebter Herr,
Sprach: „Mein Land hat kleine Städte,
Trägt nicht Berge silberschwer.

Doch ein Kleinod hält's verborgen,
Daß in Wäldern noch so groß
Ich mein Haupt kann kühnlich legen
Jedem Unterthan in Schooß."
Und es rief der Herr von Sachsen,
Der von Baiern, der vom Rhein:
„Graf im Bart, ihr seid der reichste!
Euer Land trägt Edelstein."

From Kerner's „Der reichste Fürst."

2. What nouns (or classes of nouns) are *masculine*, or *feminine*, or *neuter* in German? Mention any exceptions you know.

3. State distinctly the rules relating to the modification of the radical vowel in the Plural.

4. Give the gender, meaning and Nominative Plural of:—Zeit, Vogel, Stunde, Kaufmann, Luft, Saal, Knabe, Band Nachbar. Volk, Standuhr, Nätherinn, Geschenk, Auge, Doktor Schwester, Stuhl, Bach, Wort, Baumgarten, Thor.

5. (*a*) Decline in the Sing. and Plural:—his younger brother; the oldest language; many a green leaf (Blatt, *n.*); (*b*) Decline in the Singular:—*some* black silk; fine, ripe fruit (Obst, *n.*)—(*c*) Decline in the Plural:—Large rivers (Fluß, *m.*); what (*kind of*) houses, stone *ones* or wooden *ones*?

6. (*a*) Write down the verbs which deviate from the rules for the formation of the 1st and 3rd persons Sing. of the Present Indicative. (*b*) Show the difference in the use of wissen (to know), können (to know), kennen (to know).

7. Parse the following forms of verbs, and give the meaning and Present Infinitive of each:—mußt, gewußt, erzähltet, wähltet, seid, versprochen, geliehen, zerrissen, gefallen, verboten, abgenommen, warteten, rettet, geübt, ausgezogen.

8. Conjugate „aussuchen," giving all persons of the Present and Imperfect, and the 3rd Sing. and 1st Plural of the Perfect, Pluperfect, First and Second Futures, of the Indicative Mood.

9. Translate:—Er reis't schon ein Vierteljahr lang. Es ist erst fünf Minuten vor zehn. Ich bitte, tragen Sie das nach Hause. Seit wann wohnt ihr bei euerem Vetter? Seine Großeltern sind vor kurzer Zeit in Mainz gestorben. Fleißige Schüler lesen am liebsten lehrreiche Bücher.

10. Translate into German:—

Have they gone anywhere (anywither)? We had been nowhere. I shall write some letters to my friends this evening. Have you anything new for me? Let us hear what they say. The tired peasant-woman sits upon the wooden bench. The tops of high mountains are covered with snow. *There* (it) stands a large lime-tree before the village-church. The first navigators were very courageous men. Copy that exercise. It is to-day the twenty-third of April. We are going to the country, and they are coming to (the) town.

SECOND YEAR.

SATURDAY, APRIL 21ST:—MORNING, 9 TO HALF PAST 12.

Examiner,.....C. F. A. MARKGRAF, M.A.

1. Translate into English:—

(A) Jetzt, da sich jedes trennte
Zu seinem Elemente,
Grüßt ihn Arion's volles Herz:
„Leb wohl, und könnt' ich dich belohnen,
Du treuer, freundlicher Delphin!
Du kannst nur hier, ich dort nur wohnen.
Gemeinschaft ist uns nicht verlieh'n.
Dich wird auf feuchten Spiegeln
Noch Galatea zügeln,
Du wirst sie stolz und heilig ziehn."

Arion eilt nun leicht von hinnen,
Wie einst er in die Fremde fuhr;
Schon glänzen ihm Korinthus' Zinnen,

Er wandelt singend durch die Flur.
Mit Lieb' und Lust geboren,
Vergißt er, was verloren,
Bleibt ihm der Freund, die Zither, nur.

A. W. Schlegel, Arion.

(B) „Und da hing ich, und war's mir mit Grausen bewußt,
Von der menschlichen Hülfe so weit,
Unter Larven die einzige fühlende Brust,
Allein in der gräßlichen Einsamkeit,
Tief unter dem Schall der menschlichen Rede,
Bei den Ungeheuern der traurigen Oede.

Und schaudernd dacht' ich's, da kroch's heran,
Regte hundert Gelenke zugleich,
Will schnappen nach mir; in des Schreckens Wahn
Laß ich los der Koralle umklammerten Zweig,
Gleich faßt mich der Strudel mit rasendem Toben;
Doch es war mir zum Heil, er riß mich nach oben."

Der König darob sich verwundert schier,
Und spricht: „Der Becher ist dein!
Und diesen Ring noch bestimm' ich dir,
Geschmückt mit dem köstlichsten Edelgestein:
Versuchst du's noch einmal und bringst mir Kunde,
Was du sahst auf des Meeres tief unterstem Grunde."

Schiller, Der Taucher.

2. (*a*) Decline in both numbers:—the old Greek (griechisch) philosopher; that famous (berühmt) traveller (m.); our rich relation (fem.).

3. (*a*) How are proper names of persons declined *α.* when combined with the definite article, *β.* when used without the article. Give examples for *α* and *β*. (*b*) What proper names *cannot* be used without the article? Mention as many as you know.

4. When do possessive pronouns become *definite* words? How are they declined when definite? Give examples.

5. Parse the following verbs, and give their meaning and Present Infinitives:—trifft, läse, verschlossen, befahl, gewönnest, würfet, empfingen, trugen, nimm, hieß, getreten, läuft.

6. Write down the 3rd Sing. of the Present, Imperfect, Perfect and First Future *active*, both in the Indicative and Subjunctive, and all persons of the Imperative, of:—helfen, hingehen, lassen, sich setzen.

7. Conjugate in the *passive* voice „belohnen"; giving the 2nd Sing. and 1st Plural of all moods and tenses.

8. Translate:—Alles, was wir thun, geschieht zum Besten Derer, die uns theuer sind. Nächstens besuche ich Sie. Spätestens um halb fünf kommen wir zurück. Wer nicht für uns ist, der ist wider uns. Ihr habt große Eile. Worauf wartet er? Ich bitte dich darum. Das thut mir leid.

9. Give the meaning of, and show the difference between See (masc.) and See (fem.), beide and beides; behalten and sich erinnern; antworten and beantworten; ich setze über and ich übersetze; außerhalb and draußen; unterhalb and unten; dann and denn; zuerst and erstens.

10. Translate into German:

On the Thames near (bei) London, and on the Rhine near Rotterdam, one sees many ships. The Alps stretch (sich erstrecken) from Switzerland into southern Germany and northern Italy. (The) great princes have ambassadors at (an) all *the* courts of Europe. I heard you had departed, but I am glad to see that you are still at home. We will (Fut.) come down to you, if you cannot come up to us. The president invited all his acquaintances to dine with him to-morrow. If the strong always protected the weak, *there* would not be so much war on (auf, with art.) earth. They avoided that village, though it lay *in* (on) their way.

B. A. ORDINARY EXAMINATION.

MONDAY, APRIL 23RD :—MORNING, 9 TO 1.

Examiner,.....C. F. A. MARKGRAF, M. A.

I. Ueberſetzen Sie ins Deutſche :—

(A) The watchman of the seas leaves not the coast, duteous in his lonely cares ; while Beowulf, with his companions, marches onward. They came to where the streets were paved; an indication in that age of a regal residence. The iron-rings in their mailed coats rang as they trod in their "terrible armour." They reach the king's house ; they hang up their shields against the lofty wall. They seat themselves on a bench, placing in a circle their mailed coats, their bucklers, and their javelins. This warlike array called forth a Ulysses, "famed for war and wisdom"; they parley; the Thane hastens to announce the warlike but the friendly visitor ; and the hero, so famed for valor, yet would not obtrude his person, standing behind the Thane, "for he knew the rule of ceremony."

(B) This family, whose arrival *at* (in) the little inn we have just witnessed, came from Berlin and were going to Saxony, where the father, Paul Gerhardt, was born in the little town of G—. This pious man became afterwards famous as *a* religious poet, and (has) remained so until the present time. Paul Gerhardt had been so fortunate to obtain the office of (a) deacon at the church of St. Nicholas in Berlin ; he had administered this office with the strictest conscientiousness and fidelity, and *both* by this and by his Christian life *he had* gained the love and respect of his parishioners in a high degree. A short time ago, however, he had been complicated in the religious quarrels which at that time took place in the electorate of Brandenburg, and had had the misfortune to be dismissed from his office and exiled from the country by command of the elector.

II. Ueberſetzen Sie ins Engliſche :—

(A) Aus Goethe's „Iphigenie auf Tauris" :—

1. Aufzug. 3. Auftritt (Seite 20).
2. Aufzug. 1. Auftritt (Seiten 26–27).

(B) Aus Schiller's „Wallenstein" :—

3. Aufzug. 13. Auftritt (Seiten 93–94).

Ad A. (*a*) Vergleichen Sie die Charaktere von Thoas, Orestes, und Pylades, wie sie von Goethe und Euripides dargestellt werden. (*b*) Können Sie den Zweck angeben, welcher der Handlung von Goethe's Drama zum Grunde liegt?

Ad B. Schildern Sie Wallenstein's Charakter, wie ihn Schiller in seinem Drama aufgefaßt hat.

III. Uebersetzen Sie mit Rücksichtnahme auf die Eigenthümlichkeit der deutschen Konstruktion in jedem besonderen Satze:— Many a one wishes to catch Fortune by hunting *her;* but he only chases her away. Dresden is the capital of the kingdom of Saxony. There were twelve of us in the room You may go instead of me. The path of many men through life is like stones and thorns. I do not know what to think of, nor what to say to it. That I said *so* (that), I have never denied. Opening the door he said: Come in! Forgive me for having kept you waiting. May I rely on the promise you gave me? Not feeling quite well, I remained at home. The mother, agreeably surprised by the entrance of her son, hastened to meet him.

IV. Litteratur.

1. Welchen Ursachen läßt sich gegen das Ende des 18. Jahrhunderts die Wiederbelebung der Romantik in der deutschen Litteratur zuschreiben? Erklären Sie, was unter dem Ausdruck „Romantik" oder „romantische Dichtung" zu verstehen ist.— Nennen Sie auch die Schriftsteller, welche als die Häupter der zwei romantischen Schulen betrachtet werden.

2. Machen Sie kurze kritische Bemerkungen über die folgenden Werke:—Vorlesungen über die Geschichte der alten und neuen Litteratur; Genoveva; Phantasus; Undine; Die Gräfin Dolores; Heinrich von Ofterdingen; Aus dem Leben eines Taugenichts; Peter Schlemihl; Volksmärchen der Deutschen;—und nennen Sie die Verfasser derselben.

3. Schreiben Sie kurze Notizen über die Historiker Schlosser, Niebuhr und Ranke; und erwähnen Sie ihrer vorzüglichsten Werke.

HEBREW.

ELEMENTARY COURSE.

WEDNESDAY APRIL 18TH., 9 TO 12 A.M. 1883.

Examiners,..... { PROF. D. COUSSIRAT, B.A., B.D. / VERY REV. DEAN BALDWIN., M.A.

1. Translate literally:

a. גנבתי מארץ העברים
b. ועתה תחזקנה ידיכם
c. בן חכם ישמח אביו
d. הדריכני באמתך ולמדני

2. Parse, תחזקנה, שכחת, ישעך, פשמעכם (write out the pronunciation f this last word,)

3. Conjugate the future Pual of ברך--Decline חכם

4. Translate literally:
a. בכל-לב אצר פקודיך
b. הושיעני יהוה ואושעה
c. מה-מתוק מדבש ומה עז מארי
d. מכה איש ומת מות יומת

5. Conjugate the preterite Kal of זמם--Explain the use of מן in the words מדבש and מארי--Decline כרם

6. Parse and conjugate תן and קח—State the peculiarities of these words.

7. In what cases are vowels unchangeable?

8. What are the principles which determine the choice of new vowels?

9. What are the peculiarities of the gutturals?

10. Turn into Hebrew: (1) He shall cause to stand; (2) she has been sent;(3) they have caused to approach; (4) he shall surround;

(5) dwell (thou); (6) we have risen up; (7) my words 8 my sanctuary; (9) names (10) fathers.

FRIDAY, 13TH APRIL, 1883.

Examiners..... } REV. PROF. D. COUSSIRAT, B.A., B.D.
VERY REV. DEAN BALDWIN, M.A.

1. Translate from the 9th verse of 1st Chapter of Genesis to verse 19 inclusive.

2. ויאמר Give the Past kal of this verb, and show how the ו conversive affects, 1st, the meaning, and 2nd, the vowel points of the word. יקוו Give tense and voice. State peculiarity of the Hebrew Imperative as regards persons. תדשא, ויהי, ותראה, וירא Give full particulars concerning these verbs.

3. מזריע What part of verb, here and with its kindred substantive אשר זרעו-בו What word does the relative express when coupled with a noun having a possessive affix. Write out in Hebrew 1st personal pronoun. thus: "I," "to me," "me," "with me," "from me," "like me." מארת, להבדיל ולמועדים, ולי Give particulars of these words, and state why in ולמועדים the natural pointing of ו is changed to Shureq. ויתן From what verb? Give tense and voice. אתם What other form is there of this word? Give Hebrew of they, to them, them, with them, from them, like them.

4. Translate Chapter II from verse 8 to 20 inclusive.

5. ויטע Describe this verb. Give tense and voice. What is the LXX rendering of גן? וישם From what verb? Give the tense in its uncontracted form. נחמד What part of verb? עץ החיים Why is compensation not made for dagesh under ח?

6. יפרד Give Past kal. What voice and tense? Give name of accent over the ר. —לארבעה Give construct form of this word, also absol. fem. form. קרמהן Give absol. form, also root.

7. מות תמות Give particulars of these words, and state why so used.— היות What part of verb? כנגדו Translate literally. What is נגד

8. Translate Chapter III from verse 8 to verse 19 inclusive.

9. מתהלך Give tense and voice, also Past kal. ואשתו Why is the ה of the absolute form changed into ת? איכה What is the ה here called? Give Hebrew of 'where is he'? 'where are they'? לבלתי Analyze this word.

10. איבה How contracted. Give verb. אשית Describe this verb. Give tense and voice. ישופך Give tense, voice, person and gender. Turn into Hebrew: I am that which I am.—He has to die.—I give the whole to him.—He has eaten from the tree.—He is our God.

(OPTIONAL COURSE)

THURSDAY, 26TH APRIL, 1883.

Examiners, ... { REV. PROF. D. COUSSIRAT, B.A., B.D.
VERY REV. DEAN BALDWIN M.A.

1. Translate literally Isaiah II. 10-19.

2. Parse every word of verse 10.

3. Translate literally Isaiah, chap. IV.

4. Parse החזיקו, יקרא, סכה. Parse and conjugate יאמר.

5. Translate literally Psalm III.

6. Parse בברחו and explain the change of vowels in that word. ואישנה קומה (what is ה here?). לחי (explain the Seghol under ל and write out the usual form of the word). תרעם.

7. State the precise meaning of פשעים and of חטאים in Isaiah I. 28.

8. Explain the following expressions, and state rules ; שלשה בנים ; עשרים עיר.

9. Turn into Hebrew :—He has given children to be your princes. The people has been oppressed, every one by another. They shall lament and mourn at her gates. I know the way of the righteous. He has to die. We have the book of life.

10. Sketch the life of Isaiah, and give a *résumé* of his book.

(FOR THE NEIL STEWART PRIZE)

HEBREW GRAMMAR.

THURSDAY, APRIL 26TH :—9 to 12 A.M.

Examiners, ... { REV. PROF. D. COUSSIRAT, B.A., B.D.
VERY REV. DEAN BALDWIN, M.A.

1. What is the pronunciation of ץ ? What is the meaning of the sign of abbreviation ? Write out in Hebrew letters 1883.

2. How is it possible to distinguish between Qamets and Qamets-chathuph?

3. What is the use of accents as signs of interpunction ? Name and figure the accents called *imperatores* and *reges*.

4. Give examples of commutation, assimilation, rejection, addition and transposition of consonants in the formation of words.

5. How may a syllable end in Hebrew ?

6. Give the rules respecting the change of vowel in the article.

7. Write out the future Niphal and the future Piel of כבר

8. Write out the preterite Hiphil and the future Hithpael of שלח

9. Write out the Kal inf. constr. of נגש and ישב and the imperative of לקח

10. Turn into Hebrew: They have risen up.—We have caused to rise up. —We have understood (both forms).—Your sanctuaries.—Our enemies.

CHEMISTRY AND NATURAL SCIENCES.

FIRST YEAR.

CHEMISTRY.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. Describe the preparation of ordinary Phosphorus. Give also the differences between ordinary and red Phosphorus.

2. What are the principal sources and what the principal uses of the elements Arsenic and Antimony.

3. Explain the chemical changes which take place when Iron Ores are smelted in the blast furnace. State also the essential differences in the composition of Cast Iron, Wrought Iron and Steel.

4. Give the names, composition and sources of the principal kinds of Sugar.

5. What do you understand by Isomeric bodies? Give examples.

6. Explain the following terms:—Kindling Temperature, Fractional Distillation, Quantivalence, Homologous Series, Salt.

7. What substances are indicated by the following formulæ:—

$$C_3H_8O_3, C_2H_4O_2, C_2H_6O, H_3PO_4, SiO_2.$$

8. What are the principal chemical changes involved in the manufacture of ordinary Soap?

9. How is Carbon Dioxide prepared, and what are its properties?

10. Give the names and general composition of the more important kinds of Glass.

INTERMEDIATE EXAMINATION.

WEDNESDAY, MARCH 18th:—MORNING 9 TO 12.

BOTANY.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Explain the use of any of the inorganic materials found in the ashes of plants, and the relations of plants to the soil.

2. Name the circles of organs in a perfect flower, and describe fully the structures of the Anther and Pollen.

3. Describe the Ovary and its contained ovules, and state the changes which the latter undergo in fertilization and ripening.

4. Describe the organs of fructification in Mosses and Ferns.

5. In what do Albuminous and Exalbuminous seeds differ?

6. Explain the terms Raceme, Testa, Samara, Umbel, Pappus, Achene.

7. State the division of the Phænogamous Series into Classes, and give the characters of the classes.

8. State the distinctive characters of the Gymnosperms, Acrogens and Thallophytes, with examples.

9. In what natural families of plants do we find Samaras, Tetradynamous Stamens, and Ray and Disk Florets? Describe these structures and their uses.

10. State the place in the natural system of any genus containing Canadian trees, or edible fruits, and enumerate the principal species.

11. Describe the specimens exhibited, and refer two of them to their series classes, and orders.

THIRD YEAR.

ZOOLOGY.

MONDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,..... J. W. DAWSON, LL.D.

1. What structures are indicated by the following terms:—

Cilia,
Corallum,
Pedicellaria,
Lingual Ribbon,
Tentacle,
Tracheæ,

and in what animals are these structures found?

2. Describe the structures of a typical genus of *Infusoria*, and state the differences of the skeleton in *Rhizopoda* and *Porifera*.

3. In the class Hydrozoa describe two animals representing the two principal orders, and explain their metamorphosis, if any.

4 Describe the tube-feet and jaws of an *Echinus*, and the arms of *Uraster* and *Pentacrinus*.

5. Describe the anatomy of *Ostrea* or *Mytilus*, its place in the classification, and the structure of shell and pearl.

6. State the characters of the *Gastropoda*, and the differences between Prosobranchiates, Pulmonates and Pteropods.

7. State the special characters of *Cephalopoda*, and describe the shell of a *Nautilus* and the arms of a *Loligo*.

8. State the subdivisions of the highest sub-classes of the *Crustacea* and *Annulata*. Describe the oral and sensory organs of common species of each of these groups.

9. Describe the external parts of a Hexapod Insect, and the stages of its metamorphosis.

10. Divide the Vertebrata into classes, and characterize these, giving the orders of one of them.

11. Describe, and refer to their provinces and classes, the specimens exhibited.

B. A. ORDINARY EXAMINATION.

FRIDAY, APRIL 13TH:—MORNING, 9 TO 12.

GEOLOGY.

Examiners, ... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. Describe the Boulder Clay and overlying beds in Canada, and explain the changes of climate and life which they indicate.

2. State the subdivisions of the Carboniferous in Nova Scotia, and their equivalents in Europe.

3. Describe the Trenton Limestone and Corniferous Limestone, and state their geological relations and characteristic fossils.

4. State the geological relations of the following formations: Permian. Bunter Sandstone, Ludlow and Wenlock,—and mention the Canadian rocks of equivalent age.

5. State in order the Palæozoic Formations represented in Ontario and Quebec, with their general geographical distribution.

6. Give a detailed palæontological account of any Order or Family of invertebrate animals abundant in the Palæozoic rocks.

7. Give a detailed account of any Genus of animals characteristic of the Mesozoic period.

8. Explain the nature and origin of Volcanic phenomena.

9. Describe the Cretaceous and Eocene of Western Europe, and state what rocks represent them in Western America.

10. What are the Geological and Zoological or Botanical relations of *Belemnites, Calamites, Calymene, Sigillaria, Orthoceras, Strophomena?*

11. State what you know of the specimens exhibited.

B. A. EXAMINATION, AND THIRD YEAR IN APPLIED SCIENCE.

MINERALOGY AND LITHOLOGY.

FRIDAY, APRIL 13TH:—AFTERNOON, 2 TO 5.

Examiner,..... { J. W. DAWSON, LL.D., F.R.S. / B. J. HARRINGTON, B.A., Ph. D.

1. Describe Limonite, Pyrite, and Pyrite, and Pyrrhotite.

2. Describe Ashaltum, Albertine and Graphite, stating what you know concerning the origin of each.

3. Give the names and composition of the Silicates which enter largely nto the composition of rocks.

4. Distinguish (*a*) between Essential and Accessory constituents of rocks, (*b*) between Acidic and Basic rocks, and (*c*) between Classic and Crystalline rock.

5. Explain the following terms:—Breccia, Tuff, Plagioclase, Trichite, Macroscopic.

6. Name the more important Volcanic rocks, and describe two of them.

7. Describe Gneiss, Diorite and Argillite, giving the supposed origin of each.

8. Explain the use of the microscope in the study of rocks.

9. Name and describe carefully the rock-specimens exhibited. State also the geological relations of each.

SECOND YEAR MINING AND THIRD YEAR ARTS (ADDITIONAL DEPARTMENT).

PRACTICAL CHEMISTRY.

MONDAY, APRIL 9TH :—MORNING, 9 TO 12.

Examiner,..... .....B. J. HARRINGTON, B.A., Ph.D.

1. What are the principal points to be noted when substances are heated in closed tubes?

2. What are the ordinary uses of the following reagents?—$SnCl_2$, $Pb\ (C_2H_3O_2)_2$, $BaCO_3$, H_2SiF_6, $(H_4N)_2C_2O_4$, $KCNS$.

3. Describe the preparation of Absolute Alcohol.

4. A solution contains Calcium, Magnesium, Potassium and Sodium. Describe their detection and separation.

5. Describe any good method for the separation of Arsenic, Antimony and Tin.

6. Describe the qualitative analysis of an alloy containing Copper, Lead, Zinc and Iron.

7. Express by equations the changes which take place when Ammonium Sulphide is added (*a*) to a solution of Ferric Chloride, and (*b*) to a solution of Aluminium Chloride.

8. Describe the detection of Aluminium in presence of Chromium, and of Nickel in presence of Cobalt.

9. Give an outline of the course to be followed in the detection of Inorganic Acids in soluble substances.

THIRD YEAR ARTS (ADDITIONAL DEPARTMENT) AND THIRD YEAR APPLIED SCIENCE (CHEMISTRY COURSE).

THEORETICAL CHEMISTRY.

FRIDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiner,..... ..... B. J. HARRINGTON, B.A., PH. D.

1. What evidence is there of the existence of Hydroxyl in the so-called Hydroxyl Acids?

2. What is the characteristic group of Tertiary Alcohols and of Aldehydes? Explain the constitution in each case.

3. Distinguish between simple and compound Ethers, and state what you know concerning the constitution of each class of bodies.

4. What are Nitriles, and in what respects do they differ from Carbylamines?

5. What two views have been held with regard to the constitution of Phosphorous Acid? What facts are advanced in favour of each view?

6. Distinguish between normal Butane and Trimethylmethane. What four kinds of substitution products may be derived from these two bodies?

7. Explain the constitution of Pyrophosphoric and Pyrosulphuric Acids.

8. Give the commonly-accepted views with regard to the constitution of Benzine.

THIRD YEAR HONOURS IN NATURAL SCIENCE, AND THIRD YEAR IN THE MINING AND CHEMISTRY COURSES.

MINERALOGY.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph. D

1. Explain the following terms:—Parameter, Primary Form, Tetartohedrism, Principle of Rationality.

2. Distinguish between Trigonal and Tetragonal Tris-octahedrons, and point out the relationship between these and the corresponding hemihedral forms.

3. Explain the following expressions:

$$a : 2a : 2a : \infty c.$$
$$a : na : pa : mc.$$

Why must n in the latter be less than 2 and greater than 1?

4 Characterise the Monoclinic System, and explain the notation of the planes.

5. Explain the formation of Pseudomorphs, giving examples. Distinguish also between Paramorphs and Pseudomorphs.

6. What are the principal imperfections observable in crystals of minerals?

7. Argentite, Graphite, Corundum, Spinel, Pyrite, Zincite. Arrange these Minerals (*a*) in the order of their hardness, and (*b*) in the order of their specific gravity, beginning with the lowest. State which are fusible and which infusible.

8. What results are obtained from each of the following Minerals by heating (*a*) on charcoal and (*b*) in the closed tube?—Stibnite, Arsenopyrite, Cinnabar, Tetrahedrite, Pyrite, Fluorite.

9. How would you distinguish Millerite from Marcasite, Tourmaline from Hornblende, Chromite from Franklinite, Apatite from Pyroxene!

10. Give the blowpipe characters of Barite, Ilmenite, Sphalerite, Molybdenite and Chalcopyrite.

11. Describe the specimens exhibited.

N.B. Students taking the additional department may select seven of the above questions and six of the specimens.

B. A. HONOURS IN NATURAL SCIENCE.

MINERALOGY.

MONDAY, APRIL 2ND :—MORNING, 9 TO 12.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph. D.

1. Name the principal economic minerals found in Canada, stating briefly their usual modes of occurrence.

2. Give the composition and origan of Uralite, Agate, Calc-sinter and Kaolinite.

3. How would you distinguish Rutile from Casiiterite, Epidote from Hornblende, Millerite from Pyrite, Proustite from Cinnabar?

4. Give the composition of Leucite, Nephelite, Labradorite and Serpentine What are Geological relations of these minerals?

5. What are the blowpipe characters of Beryl, Tourmaline, Titanite Sphalerite, and Pyromorphite?

6. Name the principal minerals of the Zeolite group, and describe two of them.

A mineral was found to have the following percentage composition: Silica 39.99. Alumina 17.98, Ferric Oxide 6.45, Magnesia 2.76, Lime 32.70. Deduce its atomic and quantivalent ratios.

8. What is the empirical formula of a mineral which gave on analysis the following percentage composition: Sulphur 21.78, Antimony 32.62 Bismuth 1·06, Lead 39.97, Iron 3.63, Zinc 0.42.

9. Define Isomorphism, Polymorphism and Hemimorphism. Give examples.

10. Distinguish between the two divisions of the hexagonal system. Point out also the principal relationships between the hemihedral and holohedral forms of the system.

11. Name and describe briefly any ten of the minerals exhibited.

GEOLOGY AND PALÆONTOLOGY. (*In part.*)

TUESDAY, APRIL 10TH:—9 A.M. TO 12, AND 2 TO 5.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph.D.

1. State the manner in which the Laurentian rocks of Canada may be best divided into groups: also their fossils and probable mode of deposition.

2. Sketch the geographical distribution of the Huronian in North America, and name the characteristic rocks of the typical district.

3. Describe the Palæozoic formations represented in the vicinity of Montreal, naming characteristic fossils.

4. What formations in Canada would be indicated by the prevalence of the following genera—*Phyllograptus*, *Trinucleus*, *Leptæna*, *Pentamerus Spirifer*, *Petraia*, *Paradoxides*, *Pterichthys*.

5. Describe the following formations, and state their geological position and special points of interest connected with them—Oriskany, Corniferous, Salina, Guelph.

6. Compare the rocks and fossils of the Quebec Group with those of corresponding formations in the New York series and in England. State the distribution of the Group in Canada.

7. Give in a tabular form the series of Upper Silurian rocks in Eastern America, with their European equivalents, and describe one of the formations, naming some of its fossils.

8. Describe shortly, or figure *Scolithus*, *Ambonychia*, *Ophileta*, *Murchisonia*, *Stromatopora*, *Endoceras*, *Machaeracanthus*, *Alethopteris*, and state their geological relations.

9. How are the subdivisions of the Cambrian of England represented in Eastern America?

10. Draw a line of section from the Upper Ottawa to the upper end of Lake Erie, and indicate the formations cut by it and their geological relations.

11. Describe the mode of occurrence of the more important minerals of the Laurentian and Huronian in Canada.

EXAMINATION IN SPECIMENS.

Refer the specimens exhibited to their geological formations, and to their places in the Zoological and Botanical classifications.

GEOLOGY AND PALÆONTOLOGY. (*In part.*)

MONDAY, APRIL 23RD:—9 A.M. TO 12, AND 2 TO 5 P.M.

Examiners, ... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph.D.

1. Describe the Windsor series and the true coal measures in Nova Scotia, and give in detail the structure and accompaniments of a bed of coal.

2. State the structure and characteristic fossils of the Permo-carboniferous of Nova Scotia, and mention what is known of Permian in other parts of North America.

3. In what respects do the Cretaceous Deposits of Western Canada differ from the representative formations, in Europe. Tabulate the Western Cretaceous, stating some of the fossils.

4. Explain the order of succession of Tertiary Deposits in the Western Territories of Canada, and notice their fossils, useful minerals, and conditions of deposit.

5. State the reasons for and against the theories of Land and Marine Glaciation, as applied to the Boulder Clay.

6. What is the present state of knowledge respecting the relations of the Triassic, Cretaceous and Tertiary Floras, with respect to their general resemblances and differences, and in comparison with modern plants?

7. Discuss critically the questions involved in the origin of Oolite, Glauconite, Flint and Phosphatic nodules in the Mesozoic rocks.

8. State the mode of occurrence of the earliest known human remains, and their relations to fossil mammalia.

9. Enumerate in zoological series the principal fossils of the Canadian Post-pliocene, and explain the phenomena of raised beaches and terraces.

10. In what formations would the following genera of fossils be expected to occur:— *Gryphea*, *Belemnitella*, *Nummulites*, *Palæotherium*, *Marsupites*, *Mosasaurus*, *Ceratites*, *Pentremites*, *Zeuglodon*, *Dinoceras*, *Walchia*, *Lepidophloios*, *Machairodus*.

2 P.M.

Examination in specimens.

LITHOLOGY.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph.D.

1. Give a classification of the principal microscopic structures in rocks.

2. Three of the minerals in a rock section are Augite, Hornblende and Garnet. How would you distinguish them with the microscope?

3. Give a micro-chemical method for distinguishing Apatite from Nepheline in rocks.

4. In a rock section there is a mineral with hexagonal outline belonging either to the isometric or the hexagonal system. How would you determine the system?

5. Explain the terms Leucoxene, Viridite, Crystallite, Fluidal, Metamorphic.

6. Discuss the origin (*a*) of Coal, (*b*) of Serpentine, (*c*) of the Crystalline Schists.

7. Nepheline, Olivine, Leucite, Andalusite, Garnet. Name the principal rocks containing these minerals.

8. Name the different varieties of Andesite, and characterize each briefly. State also their geological relations.

9. Describe Trachyte, Pitchstone, Diabase and Euphotide.

10. Name and describe the rocks exhibited.

PRACTICAL GEOLOGY.

THURSDAY, APRIL, 26TH:—AFTERNOON 2 TO 5.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph.D.

1. Give an example of the principal facts to be recorded in examining a rock section or exposure.

2. Explain the method of constructing a geological map, and the relations of maps to sections, with an example.

3. What are the difficulties in discovering and tracing mineral veins, and how to be overcome?

4. What are the indications of faults when these cannot be actually seen?

5. In the case of the junction of igneous masses or dykes with beds, what facts are most important with reference to conclusions as to age?

6. Explain the causes and phenomena of the changes occurring in veins and beds near their outcrops, and in passing from one formation to another.

7. What are the conclusions to be deduced from false bedding, slaty structure, unconformability.

8. Two formations contain—the on *Leptaena sericea*, *Strophomena alternata*, *Trinucleus concentricus*; the other, *Productus cora*, *Terebratula sacculus*, *Chaetetes tumidus*, species of *Fenestella*. What are their relative ages, what formations intervene, and what might be the relations of either to the probable occurrence of useful minerals?

9. What are the most important practical points with reference to the occurrence of metallic minerals in surface deposits.

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

TRIGONOMETRY (*First Paper*)—ALGEBRA.

TUESDAY, APRIL 17TH:—9 TO 12.

Examiner, ...G. H. CHANDLER, M.A.

1.–Trace the changes in the sign and magnitude of the *cosine* as the angle increases from 0° to 360°.

2.–Prove the formulæ

$$\sin^2 A+\cos^2 A=1,$$
$$\sec^2 A=1+\tan^2 A,$$
$$\tan A=\frac{\sin A}{\cos A}.$$

3.–Given $\cos A=\frac{2}{3}$, find $\sin A$, $\sec A$, and $\cot A$.

4.–Prove the following relations:

(*a*) $\sec^2 A-1=\sin^2 A \sec^2 A$,

(*b*) $\tan^2 A-\sin^2 A=\sin^2 A \sec^2 A$,

(*c*) $(\sin A+\sec A)^2+(\cos A+\operatorname{cosec} A)^2=(1+\sec A \operatorname{cosec} A)^2$,

(*d*) $\sin (A+B) \sin (A-B)=(\sin A+\sin B)(\sin A-\sin B)$,

(*e*) $\frac{\sin A+\sin B}{\cos A+\cos B}=\tan\left(\frac{A+B}{2}\right)$,

(*f*) $\tan 50°+\cot 50°=2 \sec 10°$.

5.–Extract the square root of $\frac{1-\cos\theta}{2}$ and of $1-\sin\theta$.

6.–Resolve $12x^2 5x-2$, $a^3-a^2-x-6ax^2$, and $6a^4x^2+a^3x-a^2$ into element ary factors.

7.–Reduce the fractions $\frac{x^2+2x-3}{x^2+5x+6}$ and $\frac{x^4+a^2x^2+a^4}{x^4+ax^3-a^3x-a^4}$ to their lowes terms.

8.–If $x=\frac{\sqrt{3}+1}{\sqrt{3}-1}$, $y=\frac{\sqrt{3}-1}{\sqrt{3}+1}$, show that $x^3+xy+y^2=5$.

9.–Solve the equations:

(*a*) $\frac{a}{bx}-\frac{b}{ax}=a^2-b^2$,

(*b*) $a+x-\sqrt{a^2+x^2}=b$,

(*c*) $8x+\frac{7}{x}=\frac{65x}{7}$,

(*d*) $\left.\begin{matrix}x^2+xy=66\\x^2-y^2=11\end{matrix}\right\}$,

(*e*) $x^2y-xy^2=6=2xy$.

FIRST YEAR.

TRIGONOMETRY (*Paper II.*)

SATURDAY, APRIL 21ST:—MORNING, 9 TO 12.

Examiner,..... G. H. CHANDLER, M.A.

1. In any triangle

$$\sin\frac{A}{2}=\sqrt{\frac{(s-b)(s-c)}{bc}}$$

2. Find in terms of the sides of a triangle a formula for the radius of the circle described about the triangle.

3. Solve the triangles in which are given:

$$\left.\begin{matrix}c=897.3\\A=31^\circ\,21'\,6''\\C=90^\circ\end{matrix}\right\}\quad\left.\begin{matrix}a=831\\b=536\\C=16^\circ 28'40''\end{matrix}\right\}.\quad\left.\begin{matrix}a=1{,}000\\B=120^\circ\,15'\,15''\\C=36^\circ\,52'\end{matrix}\right\}.$$

4. At a distance of 200 yds. from the foot of a church tower, the angle of elevation of the top of the tower was observed to be 30°, and of the top of the spire of the tower 32°. Find the height of the tower and of the spire.

5. On the bank of a river there is a column 200 feet high supporting a statue 30 feet high. The statue to an observer on the opposite bank subtends the same angle as a man 6 feet high standing at the base of the column. Find the breadth of the river.

FIRST YEAR.

GEOMETRY.

SATURDAY, APRIL 14TH:—9 TO 12.

Examiner, ...G. H. CHANDLER, M.A.

1. Describe a square that shall be equal to a given rectilineal figure.

2. From a given circle cut off a segment containing an angle equal to a given rectilineal angle.

3. Make an isosceles triangle having each of the base angles double of the vertical angle.

4. The bisector of the vertical angle of a triangle divides the base into segments which have the same ratio as the other sides of the triangle.

5. To two straight lines find a third proportional and also a mean proportional.

6. In any right-angled triangle, any rectilineal figure described on the hypotenuse is equal to the similar and similarly described figures on the sides.

7. Straight lines are drawn from three points A, B, C, to any point in the plane of the triangle, and produced to cut the opposite sides in A′ B′ C′; prove that

$$AB'.\ BC'.\ CA' = A'B.\ B'C.\ C'A.$$

8. Prove that the lines drawn from the angles of a triangle to the points of contact of the inscribed circle meet in a point.

9. In a parabola the subnormal is constant, and the subtangent is double of the abscissa.

10. From any point outside a parabola draw a pair of tangents to the curve.

11. The sum of the focal distances of any point of an ellipse is constant.

SECOND YEAR.

MECHANICS.

SATURDAY, APRIL 14TH :—9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. A stone is dropped from the top of a cliff, and after $3\frac{1}{2}$ seconds it is heard to strike the base; find the height of the cliff, supposing sound to travel at the rate of 1120 feet per second.

2. A pressure of 2 tons acts upon a train weighing 150 tons for 10 minutes; find the velocity acquired and the distance travelled.

3. A body is projected with a velocity of 60 feet per second up an inclined plane which makes an angle of 30° with the horizon; what will be its position at the end of 10 seconds?

4. How much work must be expended in turning over a cube of granite weighing w tons, each edge of the cube being a yards?

5. A uniform rod rests with its extremities on two props; where must a weight, equal to the weight of the rod, be hung, so that the pressures on the props may be as two to one?

6. Find the direction and magnitude of the least force which will (1) draw a body up an inclined plane, (2) prevent it from sliding down the plane, the angle of repose being α, and the inclination of the plane θ.

7. The lever of a jack-screw is 4 ft. long, the diameter of the screw is 3 ins., the pitch $\frac{1}{4}$ in., and the coeff. of friction 0.1; how great a weight will a force of 10 lbs. raise?

8. Find the centre of gravity of the area of a semicircle.

9. The sp. gr. of copper being 8.8 and of tin 7.3, find the weights of each of these metals in a mass of gun-metal weighing 500 lbs., its sp. gr. being 8.6.

10. A rectangle is immersed vertically with one edge in the surface of a liquid; show how to draw a horizontal line dividing the rectangle into two parts which are equally pressed by the liquid.

SECOND YEAR.

CALCULUS.

TUESDAY, APRIL 17TH:—9 TO 12.

Examiner,.....G. H. CHANDLER, M.A

1. Prove the formulæ for differentiating s^m, a^s, $\sin x$, and $\sin^{-1}x$.

2. Show that

(*a*) $d\,(a^2-x^2)\sqrt{a+x} = \frac{1}{2}\,(a-5)x\sqrt{a+x}.dx,$

(*b*) $d\left(\frac{e^x}{1+x}\right) = \frac{xe^x\,dx}{(1+x)^2},$

(*c*) $d\,(\cos mx)^n = -\,mn\,(\cos mx)^{n-1}\sin mx\,dx,$

3. If $y = \frac{1}{x}$, show that $\frac{dx}{\sqrt{1+x^4}} + \frac{dy}{\sqrt{1+y^4}} = 0.$

4. Expand $\log(1+x)$ into a series.

5. Find the radius and altitude of the maximum cylinder which can be cut from a given oblate spheroid.

6. Show that the tangent to the curve

$$a^2x = (a-x)^2y$$

is parallel to the axis of x when $x = x\,a$, perpendicular to it when $= a$; also, that the tangent at the origin bisects the angle between the axes.

7. Integrate $\frac{1}{2}x^{-\frac{1}{2}}\,dx$, $3x^1\,dx$, $2\cos 2x\,dx$, and $\frac{dx}{a+x}$.

8. Show that

(*a*) $\int\frac{2dx}{4+x^2} = \tan^{-1}\frac{x}{2},$

(*b*) $\int\frac{x\,dx}{\sqrt{a^2+x^2}} = \sqrt{a^2+x^2},$

(*c*) $\int\frac{dx}{x\log x} = \log(\log x),$

(*d*) $\int\frac{(3x^2-1)\,dx}{x(x-1)(x+1)} = \log(x^3-x)$

9. Find the area of the curve of question 6 from $x = 0$ to $x = \frac{1}{2}a$.

10. Prove that the volume of a paraboloid of revolution is equal to half the volume of the circumscribed cylinder.

SECOND YEAR.

ANALYTIC GEOMETRY.

SATURDAY, APRIL 21ST :—MORNING, 9 TO 12.

Examiner, ... G. H. CHANDLER, M.A.

1. The equations of the sides of a triangle are $x + 2y = 5$, $2x + y = 7$, $+y - x = 1$; find :

(1.) The vertices of the triangle.
(2) the lengths of the sides.
(3) the lengths of the perpendiculars.
(4) the lengths of the medial lines.

2. Prove that in all cases the medial lines of a triangle meet in one point.

3. Find in inches the area of the triangle whose angles are at the points (7,2), (4,5), (3,1), measured on a half-inch scale.

4. Transform the hyperbola $y^2 - x^2 = 6$ to axes which bisect the angles between the old axes.

5. A circle passes through the origin, and through the point (3,7) and its centre is on the axes of x; what is its equation.

6. Find the angle between the axis of x and the tangent to the circle $x^2 + y^2 = 16$ at the point whose abscissa is—3.

7. Given the base and ratio of the sides of a triangle, find the locus of the vertex.

8. Determine the major and minor axes, and the eccentricity of the curve $3(x^2 - 5) = 5y^2$.

9. Find the condition that the line $\frac{x}{m} + \frac{y}{n} = 1$, may be a tangent to the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.

10. Prove that the tangent at the point (x', y') on the parabola $y^2 = 2mx$ is $y'y = m(x + x')$ and hence show that the subtangent of a parabola is bisected by the curve.

THIRD YEAR.

SPHERICAL TRIGONOMETRY—PRACTICAL ASTRONOMY.

SATURDAY, APRIL 14TH:—9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Prove the fundamental equation $\cos a = \cos b \cos c + \sin b \sin c \cos A$, and deduce the formulæ

$$\mathit{Cos}\ \frac{A}{2} = \sqrt{\frac{\sin s \sin (s-a)}{\sin b \sin c}},$$

$$\mathit{Sin}\ \frac{a}{2} = \sqrt{\frac{\cos S \cos (S-A)}{\sin B \sin C}}.$$

2. How would you solve a spherical triangle, (1) given two sides and the included angle, (2) given two sides and an angle opposite one of them?

3. Give the names of the sides and angles of a spherical triangle of which the vertices are the zenith, the pole, and a star.

4. Explain how the latitude of a place may be found, (1) by observing an object in the meridian, (2) by observing an object out of the meridian.

5. At Montreal, April 6th, 1883, with a meantime chronometer, the first limb of the sun is observed to cross the meridian at 0h. m. 11.24 sec., and a Cancri at 7h. 51m. 56.14 sec.; from these observations calculate the rate of the chronometer.

6. Find the longitude of a place at which the bright limb of the moon is observed by a sidereal chronometer to culminate at 6h. 8m. 45.09 sec., April 12th, 1883, the chronometer being 2.6 sec. slow.

THIRD YEAR.

MECHANICS.

TUESDAY, APRIL 17TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Find the resultant of two equal forces, each of 20 lbs., acting at an angle of 35°.

2. Show that a force P, working, at the extremity of a lever of length a, a screw of radius r, will raise a weight

$$= \frac{aP}{r} \cot (a + x).$$

where a is the angle of the screw thread and $\tan \theta$ the co-efficient of friction.

3. Find the centre of gravity of a solid composed of a cylinder and a cone on the same base and of equal altitudes, (1) when their densities are equal, (2) when the density of the cone is double that of the cylinder; and find their relative altitudes when the centre of gravity is in the centre of their common base, the densities being equal.

4. A conical diving bell is sunk until the water rises half-way up inside the bell, find the depth.

5. Describe the siphon gauge, and Wollaston's method of increasing its sensitiveness.

6. A crystal of salt weighs 6.3-grains in air; when covered with wax, the specific gravity of which is 0.96, the whole weighs 8.22-grains in air and 3.02 in water; find the specific gravity of the crystal.

7. What is the numerical value of the acceleration of gravity when the units of time and distance are, respectively, a minute and a yard.

8. Two weights P and $2P$, connected by a string, are hung vertically over a smooth pulley; after they have been in motion for 3 seconds a weight $\frac{1}{2}P$ is added to P; find the velocity at the end of the fifth second.

9. Prove that the form of the free surface of a liquid which rotates about a vertical axis is that of a paraboloid of revolution.

10. A particle resting on the top of a smooth circular cylinder whose axis is horizontal, receives a slight displacement in a direction at right angles to the axis; where will it leave the cylinder?

THIRD YEAR.

MATHEMATICS (ADVANCED).

SATURDAY, APRIL 21ST :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. If $u = log_y x$, show that $ux\frac{du}{dx}+y\frac{du}{dy}=o$

2. Find the equation of the tangent at any point $(x,' y')$ on the hypocycloid $x^{\frac{2}{3}} + y^{\frac{2}{3}} = a^{\frac{2}{3}}$; show that the intercept of the axes in the tangent is constant and $= a$; and that the perpendicular from the origin on the tangent is $\sqrt[3]{ax'y'}$.

3. Show that (a, o) and (o, a) are points of inflexion on the curve $x^3 + y^3 = a^3$.

4. Prove that the radius of curvature at any point of the curve of question 2 is equal to three times the length of the perpendicular from the origin on the tangent.

5. The vertical angle of the greatest cone which can be described by a right-angled triangle of constant hypotenuse is $2\ tan^{-1}\sqrt{2}$.

6. Show that $\frac{\pi}{4x} tan \frac{\pi x}{2} = \frac{\pi^2}{8}$ when $x = o$, and that $\frac{sec\ x}{sec\ 3x} = -3$ when $x = \frac{\pi}{2}$.

7. Find the values of the following integrals ;

$$\int tan^4 x\ dx,\ \int e^x\ sin\ 2x\ dx.\ \int sin^3 x\ dx.$$

8. Show that the area of the curve $x^2y + a^2(a-y) = o$ from $x = o$ to $x = \frac{a}{2}$ is $\frac{a^2}{2} log\ 3$.

9. Find the centre of gravity of a frustum of a paraboloid of revolution, the radius of the circular base being r.

10. The sum of the squares of any pair of conjugate diameters of an ellipse is constant.

11. The direction cosines of any straight line being l, m, and n, shew that $l^2 + m^2 + n^2 = 1$.

12. Find the condition that a given straight line may be parallel to a given plane.

13. Find the equation of the tangent plane at the point (a, a, a) on the surface $xyz = a^3$, and the volume of the pyramid which it makes with the co-ordinate planes.

CIVIL ENGINEERING.

SECOND YEAR.

ESSAY.

Examiner,..... .....HENRY T. BOVEY, M.A., C.E.

Write an Essay on the Pratt-truss bridge and its modifications.

MECHANICAL ENGINEERING.

THIRD AND SECOND YEAR.

ESSAY.

WEDNESDAY, APRIL 11TH :—MORNING, 9 AM.

Examiner,.....HENRY T. BOVEY, M.A., C.E.

Write an essay on the TEETH OF WHEELS, with especial reference to the following:—

(*a*).-The theoretical and practical methods of delineating the different kinds of teeth.

(*b*).-The length and other proportions of a tooth.

(*c*).-The relative merits of epicycloidal and involute teeth.

(*d*).-Bevil-wheel teeth.

(*e*) -The efficiency and strength of teeth.

CIVIL ENGINEERING.

B. A. Sc. ORDINARY EXAMINATION.

ESSAY.

WEDNESDAY, APRIL 11TH :—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., C.E.

Write an essay on Indicators and Indicator Diagrams, with especial reference to the following:—

(*a*).-The construction and uses of an Indicator.

(*b*).-The method of fixing an Indicator, and the precautions to be observed.

(*c*).-Continuous Indicators.

(*d*).-The conclusions to be drawn by the aid of an Indicator Diagram. State in detail the defects exhibited by each of the diagrams on the accompanying sheet.

CIVIL ENGINEERING.

THIRD YEAR.

ESSAY.

WEDNESDAY, APRIL 11TH:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., C.E.

Write an essay on RETAINING WALLS, with especial reference to the following:—

(*a*).-The stability and sectional form of Dock-walls.

(*b*).-The mathematical theory of earth-pressure and its divergence from fact, with examples.

(*c*).-The angle of repose and the influence of vibration.

(*d*).-The use of counterforts and offsets at the back of a wall.

(*e*).-The foundation.

(*f*).-Concrete walls.

Design a Dock-wall for a 30-ft. depth of water, its foundation being in a loose sandy soil.

CIVIL, MECHANICAL AND MINING ENGINEERING.

B. A. SC., SECOND AND THIRD YEARS.

MATERIALS, (*Timber*).

TUESDAY, APRIL 3RD;—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.A., C.E. / JOHN KENNEDY, M. Inst. C.E.

1.—State the precautions to be observed in selecting trees for structural purposes, and remark as to the best season for felling such trees.

2.—Give the properties of the following timbers, and state the uses to which they are generally applied:—White-Pine, Cedar, Walnut, Elm, Ash Maple, Beech.

3.—What is the object of seasoning timber? Describe, in detail, the methods of seasoning—(1).—by steaming, (2).—by hot air. (3).—by smoke-drying, (4).—by the direct extraction of the sap, (5).—by boiling in oil.

4.—Describe the ordinary defects of timber, and state the causes which lead to its decay, with remarks as to the forms in which such decay exhibits itself.

5.—Describe the following artificial methods of preserving timber and discuss their relative efficiency :—(1).—Painting, (2).—Creosoting, (3).—Kyanizing, (4).—Burnettizing, (5).—Beerizing.

6.—Name the woods which are most suitable—(1).—for pattern-making, (2).—when elasticity is an important requisite,(3).—when both elasticity and toughness are required, (4).—for ship-building, (5).—for the teeth of wheels, (6).—for railroad cars, (7).—for machine frames.

7.—State all you know as to the shrinkage of timber.

8.—Define the terms *limit of elasticity*, *co-efficient of elasticity*, and state how the latter, in the case of timber, is affected by age, the nature of the soil, ebullocality, and the season of felling.

9.—Give a formula for finding the strength of a timber log of rectangular section, supported at both bends and loaded in the centre. Find the depth of a pine log 10 ft. 8 ins. in the clear, and 5-ins. wide, which will bear a load of 2,560-lbs. at the centre.

10.—Describe, *fully*, the specimens on the table.

CIVIL, MECHANICAL AND MINING ENGINEERING.

B. A. Sc., Second and Third Years.

MATERIALS (*Lubricants*).

Tuesday, April 3rd :—Afternoon, 3 p.m.

Examiners,..... .... { Henry T. Bovey, M.A., C.E. / John Kennedy, M. Inst., C.E.

1.—State the laws of journal friction, fluid friction, and sliding friction.

2.—Describe Morin's experiments to determine coefficients of friction.

3.—How does friction affect the efficiency of a lubricant? What are the objects of lubrication? Give the characteristics of a good lubricant.

4.—Classify the different *fors* of lubricant.

5.—Describe the manufacture and mode of using metalline.

6.—Describe a good method of purifying lubricating oils.

7.—Remark upon the oiling of journals.

8.—Enumerate the various impurities found in oils, and state their effect. How would you detect the presence of, (1).—copper, (2).—lead, (3).—an acid?

9.—Classify the fatty unguents.

10.—What are the best lubricants—(1).—for ordinary machinery, (2).—for steam cylinders, (3).—for delicate mechanism (*watches, etc.*), (4).—under low temperatures, (5).—under heavy pressures and high speed, (6).—under light pressures and high speed, (7).—under *very heavy* pressure with low speed, (8).—under heavy pressure with low speed.

FIRST YEAR.

FREEHAND DRAWING.

TUESDAY, APRIL 3RD, 1883:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, MA.E.

1. Make a freehand drawing of the objects before you, as they appear from your point of view.

2. Copy and complete on a scale of one-fifth the linear designs exhibited.

NOTE:—Shade and shadow *may* be added to the object drawings. The point from which the light is supposed to come should be indicated.

SECOND YEAR.

DESCRIPTIVE GEOMETRY.

MONDAY, APRIL 2ND, 1883:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, MA.E.

1. A cone has an apex angle of 30°, find the section caused by a plane which makes an angle of 10° with the axis.

2. Project orthographically:—

(*a*) An hexagonal prism when the axis makes an angle of 30° with the horizontal and 45° with the vertical.

(*b*) A cylinder, when the end makes an angle of 60° with the horizontal and is perpendicular to the vertical.

(*c*) A regular tetrahedron of 2 in. edge when three angles are respectively 1 in., $1\frac{1}{2}$ in., and $2\frac{1}{2}$ in. above the horizontal.

(*d*) A square threaded screw, pitch $\frac{1}{2}$ inch and outside diameter 2 inches.

3. The horizontal traces of two planes make angles of 90° and 45° with the vertical; and the vertical traces angles of 45° with the horizontal. Find the angle between the planes and the angles which the planes make with the horizontal.

4. Show the development of the cone in question 1.

5. Project isometrically a stool the top of which is a square of 12 in. and height 18 in. The legs are 2 in. square, and are within a square of 10 inches.

THIRD YEAR.

DESCRIPTIVE GEOMETRY.

MONDAY, APRIL 2ND, 1883:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, MA.E.

1. Project orthographically, a square pyramid when the base is at an angle of 60° and one side is inclined at 75° to the horizontal. The base is 1 in. side and the slant height 1 inch. (*a*) Show elevation on a plane which makes an angle of 60° with the base of the pyramid.

2. A cone of revolution, the axis of which is inclined at 60° to the horizontal and 15° to the vertical, is penetrated by a cylinder, of which a horizontal section is a circle, and the axis of which makes angles of 40° with both planes. The angle at the apex of the cone is 30°. Show plan and elevation of section line. (*a*) Develop the cone.

3. The angles of a spherical triangle are 30°, 60° and 120°, find the sides.

4. The rays of light are represented in plan and elevation by lines making angles of 45° with both planes. Show the shadow caused by a regular octagonal prism when the rays meet both planes.

5. Construct the parallels and meridians for a map on the polyconic method, between N. 60° and 65°, and embracing seven degrees in longitude.

6. Project a cube axometrically when the axes as projected make angles of 100°, 120° and 140°.

7. Project perspectively a cylinder surmounted by a plinth. The plinth makes angles of 30° and 60° with the picture plane. The height of the cylinder is 9 ft.

(*a*) Find the perspective of shade and shadow caused by rays which meet the picture plane so that their vertical and horizontal projections are inclined at 60° and 30° to the ground line.

8. Find the perspective of a regular octahedron when an axis is vertical, six feet on the left and six feet within the picture. The sides of the octahedron measure 4 ft, and one of them, which is horizontal, makes an angle of 30° with the picture plane.

9. Prove that the perspectives of parallel lines meet in a point.

SECOND YEAR.

SURVEYING.

THURSDAY, APRIL 19TH, 1883:—MORNING, 9 TO 12.30.

Examiner,.....C. H. MCLEOD, MA.E.

1. High ground prevents stations A and B being intervisible. How would you find, by ranging rods, a point "in line" between A and B?

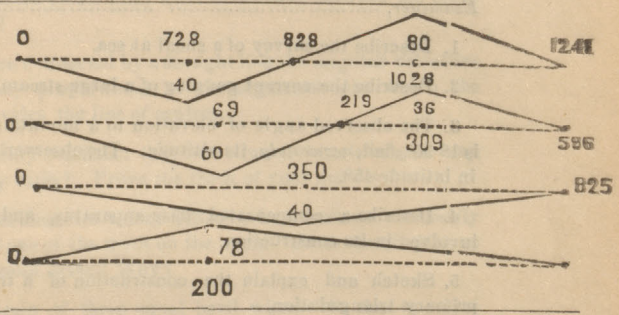
2. There is an inaccessible line and a station A. It is required to trace a line through A parallel to the inaccessible line, without the use of an angular instrument.

3. Express S *by* E in degrees.

4. Convert (a) 4.5 acres into arpents, (b) 5 feet French measure in metres.

5. Plot the following notes to a scale of 30 chains to one inch. Obtain the area graphically and show how to obtain it directly from the notes The length of one side and one bearing is to be supplied.

Le .	Bearing.	Length.	Field Boundaries.
1	*N.*21°.*W.*	12.41	
2		5.86	
3	*N.*12° *E.*	8.25	
4	*N.*47° *W.*		



6. Show how to produce a line correctly with a transit when the line of collimation is not perpendicular to the horizontal axis. (a) Describe the adjustment of this instrumental error.

7. Explain the tangent screw connection between the upper and lower plates of an engineer's transit.

8. The reading by stadia hairs at an elevation of 15° corresponds to a distance of 250 feet. Find the true horizontal distance.

9. Explain the adjustments of the Y level.

10. Two lines have bearings of 320° and 300°. Show the field-notes for a 4° curve beginning with a chainage of 4.75. The instrument is to be set at station 7.50.

11. How would you conduct a traverse survey so that the needle would act as a check on your bearings ?

12. Explain how you would renew the magnetism of a needle.

13. How are levels taken on railway locations ?

14. Explain the use of the target-rod.

15. Show notes of cross-sections by a pocket level, and explain your method of working.

16. If, in running a line of levels, you were to meet a deep ravine into which it was necessary to level, how would you proceed ?

THIRD YEAR.

SURVEYING.

MONDAY, APRIL 9TH, 1883:—9 TO 12 A.M.

Examiner,.....C. H. MCLEOD, MA.E.

1. Describe the survey of a shoal at sea.

2. Describe the current gauging of a large stream.

3. The observed angle of elevation to a mountain peak distant 25 miles is 1° 30', find, *accurately*, its altitude. The observer's station is at sea-level in latitude 45°.

4. Describe a compensated base-apparatus, and state the principles involved in its construction.

5. Sketch and explain the construction of a tripod and stand for a primary triangulation.

6. Sketch and describe the construction of a 30 in. theodolite and its appliances.

7. Find the azimuth of the pole star at its greatest western elongation on March 6th, 1883.

8. Prove that the difference of the logarithms of the heights of a barometer multiplied by a constant gives the difference of the elevations of any two points.

(*a*) What conditions modify this relation.

9. The observed sidereal time of passage of the mean wire of a portable transit instrument at Montreal on April 2nd, 1883, was as follows:—

Lamp East.				Lamp West.			
	hrs.	min.	sec.		hrs.	min.	sec.
μ Leonis,	9	46	36.32	ε Leonis	9	39	47.00
a Leonis,	10	02	39.25	1 Leonis,	10	43	41.30
32 Ursae maj.	10	09	54.00	a Ursae maj.	10	57	02.90

The error in collimation was + 2.1 seconds and of level + $\frac{1}{10}$th of a second. Determine the error of the chronometer. (*a*) Prove the formulæ used in correcting for azimuths and level deviations.

SECOND YEAR.

MECHANISM.

SATURDAY, APRIL 21ST, 1883:—9 TO 12 A.M.

Examiner..... C. H. MCLEOD, MA. E.

1. If the crank in the mechanism giving a quick return to a Whitworth shaping machine is 6 in. long, the slotted arm 9 in. long, and the distance between the centres of these pieces 1 in., what is the ratio between the times of advance and return?

2. When two arms are connected by a straight link the angular velocities of the arms are inversely proportional to the segments into which the direction of the link divides the line of centres.

3. What is the necessary condition that two circular wheels in gear may have a uniform velocity ratio? Prove the truth of your answer.

4. A pin wheel 6 in. in diameter works with a rack. Construct accurately a full size elevation of one of the teeth on the rack. There are six pins on the pinion. Which should drive? Why?

5. In an epicyclic train of three equal bevil wheels the first and last wheels are on the same axis. The first wheel turns twice per second, and the arm turns once in three seconds in a direction opposite to the first wheel. How many turns does the last wheel make per *a*) second? (How would you drive the arm of this train?

6. How may two worm wheels be applied to feed a drill?

7. A "parallel motion" is composed of two rods, one of these turns about a fixed centre and is jointed to the second rod, so that the length of the first rod multiplied by one segment of the second rod is equal to the square of

the other segment of the second rod. One end of the second rod is attached to a long radius rod, so that it moves in a line which nearly coincides with the direction of the fixed centre of the first rod.

8. Two parallel shafts are 10 ft. apart. If there is a pair of equal cone pulleys on each, of which the outside diameters are 3 ft. and 1 ft., what is the diameter of the middle pulley (*a*) for a crossed belt (*b*) for an open belt?

9. How is the curve of the fusee obtained?

10. How is the swing of the pendulum maintained when a dead beat escapment is used?

11. Explain fully how would you apply a Hookes joint to communicate uniform motion.

12. Describe a joint by which two parallel axes which are near to one another may be connected, where the velocity ratio is 2.

MECHANICAL ENGINEERING.

SECOND AND THIRD YEAR.

MECHANICAL WORK.

THURSDAY, APRIL 19TH, 1883:—9 TO 12 A.M.

Examiner,.....C. H. MCLEOD, MA.E.

1. Discuss the objections to punched rivet holes in the various kinds of iron and in steel plates, stating how these disadvantages may be overcome. What are the advantages and disadvantages of drilled rivet holes? How is the fracture of a very long rivet prevented?

2. Show that in a double riveted joint the theoretical value of the pitch is $1.57\frac{d^2}{t}+d$. Tensile strenght is equal to shearing strenght

3. In calculating the strength of bolts, the value of the tensile strength of wrought iron is taken at values ranging from 6,000 to 1,500 lbs. Why is this? State the value of f in two or more cases.

4. Make sketches of the following:—Counter sunk bolt-head, snug neck-bolt, hook-bolt, saddle key, cone key, split pin, a jib and cotter.

5. What is the usual taper for cotters? For metal somewhat oily $u=0.08$; what is the limiting angle of taper?

6. Make a sketch, giving the relative proportions of a flange joint for a cast-iron pipe.

7. The load on a crank pin journal is 5,000 lbs.; the length is 1.87 in.; f= 9,000 lbs. Calculate the diameter.

8. Give some account of the various forces to which mill shafting is subject.

9. Show that $d=\sqrt[3]{)}K+\sqrt{K^2+1)}\sqrt[3]{\frac{5.1}{f}}\sqrt[3]{T}\sqrt[3]{P.}$ for a shaft connected with a steam engine; where $M=K.T$, M being the bending moment and T the twisting moment; $P=T$ max. $\div$ T mean.

10. Make a sketch of a small eccentric with relative dimensions.

11. What are the different forms of turbines?

12. What are the colors which hardened steel assumes on being tempered? State these in their order of hardness.

SECOND AND THIRD YEAR.

MECHANICAL WORK.

PAPER II.

THURSDAY, APRIL 19TH, 1883:—2 TO 4 P.M.

Examiner,.....C. H. MCLEOD, MA.E.

1. Design a line of mill shafting of wrought iron where the total twisting moment is 50,000 inch-lbs. The first bearing is in a wall-box, and the second 10 ft. distant, is a bracket pedestal. The main driving pulley is midway between these bearings, and the belt is vertical. There is a coupling just beyond the bracket.

Scale 1 inch = 1 ft.

Details $\frac{1}{4}$.

THIRD YEAR.

(MECHANICAL ENGINEERING.)

GEOMETRY OF MACHINERY.

SATURDAY, APRIL 21ST, 1883:—MORNING, 9 TO 12.

Examiner,..... .....C. H. MCLEOD, MA.E.

1. How is the relative velocity of a pair of teeth determined? What is the extent of sliding motion of a pair of teeth?

2. Show how to design the teeth of wheels so that any desired portion of the path of contact may be in the arc of recess.

3. When is the total obliquity of a pair of non-circular wheels greatest and what is its magnitude?

4. Show a sketch, to scale, of an intermittent gear wheel and its driver. The follower is to rest during one-third of the revolution of the driver.

5. State the general principles of elementary combinations in screw wheel-work.

6. What is the effective radius of a pulley which is driven by a band.

7. Obtain an expression for "swell" in speed pulleys. (*a*) A pair of speed pulleys on axes 10 ft. a part are to communicate velocity ratios of 3, 2, 1, $\frac{1}{2}$ and $\frac{1}{3}$; calculate a set of suitable diameters for an open belt.

8. There is a cross-head driven by a crank and connecting rod; show how to find graphically the velocity ratio at any instant.

9. How would you connect two shafts which nearly meet, and are nearly parallel, by a single joint? (*a*) How would the velocity ratio of the shaft be determined.

10. Design a Watt's parallel motion from the following data: Distance between centres of radius rods 50 inches, length of perpendicular to means position of rods 38 inches, length of stroke 12 inches; (*a*) calculate the greatest deviation of the parallel point.

MECHANICAL ENGINEERING.

THIRD YEAR.

MACHINERY AND MILLWORK. (*Paper I.*)

MONDAY, APRIL 23RD :—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., C.E.

1.–Show how to determine the ratio of the slack to the sliding tension of a flexible band on a pulley.

The slack tension of a belt in ordinary condition, on a wooden pulley, is 150-lbs.; the belt embraces *half* the circumference; the co-efficient of friction is .47; determine, (*a*).–the sliding tension, (*b*) the wheel friction between the belt and pulley, (*c*).–the horse power transmitted by the belt, which is 10-ins. wide, 22-ins. thick, and passes over 50-ft. per second.

2.–When belts are run horizontally, should the upper or lower portion be the driving half? Give reasons for your answer.

3.–Classify the different kinds of dynanometer, and describe Prony's *friction* dynanometer.

Give an example shewing its application.

4.–Give a general description of the action of brakes.

A flexible brake is to be employed, (*a*).–to produce a great resistance compared with the force applied to the brake, (*b*).–to produce a resistance which shall be always less than a certain given force; how would you deal with each case?

Give an example falling under (*b*).

5.–When a uniform shaft transmits work, shew that its efficiency is $1-2.w\frac{f}{s}.l$, w being the specific weight of the material, f the co-efficient of friction, s the greatest stress in the material, and l the length of the shaft.

An iron shaft is 866-ins. in length and 14.9-ins. in diar.; it is driven by a pair of cranks set at right angles and 21.7-ins. in length; the horizontal pull upon each crank pin is 176,400-lbs.; determine the efficiency of the shaft, inasmuch as it is affected by its weight. *coeff. of friction*=.05.)

6.–Shew how to determine the efficiency of link work.

7.–Two spur-wheels have the one 36 and the other 12 involute teeth; if the co-efficient of friction is .15, determine the efficiency.

8.–A pivot rests in its step, and is subjected to a pressure P in the direction of its axis; find the moment of friction at the base, with respect to the axis,

(a).–When the pivot is cylindrical and solid.

(b).–When the pivot is conical.

State the properties of Schiele's anti-friction pivot.

MECHANICAL ENGINEERING.

THIRD YEAR.

MACHINERY AND MILLWORK. (*Paper II.*)

MONDAY, APRIL 23RD:—AFTERNOON, 3 P.M.

Examiner, ... HENRY T. BOVEY, M.A., C.E.

1.–Describe the various methods used to obtain quick returns in machine tools.

Arrange a crank and slot so that the time of forward motion may be six times that of the return.

2.–Shew how to calculate the force which the pins passing through the cranks of a connecting rod must exert on the rod when the axle has a given angular velocity?

3.–What considerations determine the length and thickness of a steam-cylinder?

4.–Deduce a general expression for the number of bolts in a cylinder head.

How many $\frac{3}{4}$-in. bolts are required for the head of a steam cylinder 24-ins. in diar., the pressure of the steam being 75 lbs. per sq. in.?

5.–Describe the construction of the steam-chest.

6.–Describe the construction of the cross-head.

7.–The engine in Question (4) makes 60 revolutions per minute; the length of the stroke is 48-ins.; the ratio of the lengths of the connecting rod and crank is 5; the admissible maximum pressure upon a slide is 125 lbs. per sq. in.; find the area of the slide.

8.–Explain how to find the distance between the *guides* of a steam-engine.

9.--State the considerations which would govern you in the design of the crank-pin and boxes.

10.--Discuss the action of the weight and velocity of the reciprocating parts, and deduce an expression for the weight of the latter, being given the initial and final pressures of the steam, the diar. of the cylinder, the radius of the crank and the number of revolutions per minute.

B.A.Sc. ORDINARY EXAMINATIONS.

DESIGNING, &c.

Examiners,..... { HENRY T. BOVEY, M.A., C.E.
JOHN KENNEDY, M.Inst. C.E.

1. (*a*).—A pier for a double-track railway bridge: depth of water=25-ft. height of lower chord from water=35-ft.; current runs at 2 miles per hour; there is a soft clay bottom 12 ft. thick over a stiff clay stratum 40-ft. thick, resting upon hard pan.

(*b*).—An iron roof-truss of 180-ft. span for a workshop, with a row of columns in the centre; the roof to have a clear storey 20-ft. wide for windows 9-ft. high.

2. (*a*).—A masonry railway culvert, under a single-track embankment rising 30-ft. over top of arch; the culvert to afford 60-sq. ft. of water-way

(*b*). A Pratt-truss double-track iron railway bridge of 250-ft. span, and 30-ft. clear width.

3. (*a*).—A wooden dam for a stream 400-ft. wide; height of dam=6 to 8 ft. above general bottom; the depth of overflow over whole dam during freshets=4-ft. Also, a timber-work entrance and regulating gates for a race-way from the end of the dam; the raceway to be 60-ft. wide at water. surface, 45-ft. wide at bottom, and to be 5-ft. deep.

(*b*).—A reverberatory furnace for smelting copper.

4. (*a*).—The general plans and chief details (*gates excepted*) of a lock 300 ft. long, 44-ft. wide and 16-ft. deep; the lift to be 10-ft.

(*b*).—A timber Howe-truss single-track railway bridge of 100-ft. span and 16-ft. clear width.

5. (*a*)—An iron lattice swing-bridge for a roadway over a canal; the span=50 ft., the clear width for vehicles=18-ft., the width of each of two foot-paths=5-ft.

(*b*).—A grappler for lifting boulders up to 14-ft. in width and 50-tons in weight, with any taper over 8-ins. horizontal to a foot vertical. The grappler to have two pairs of arms 9-ft. in length from pivot to points placed 4½-ft. apart, and the arms to be prolonged above the pivot to a length not exceeding 5½-ft.

N.B.—A specification and estimate are required for each design.

CIVIL, MECHANICAL AND MINING ENGINEERING.

B. A. Sc., and THIRD YEAR.

BRIDGE CONSTRUCTION. (*Paper I.*)

TUESDAY, APRIL 10TH:—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.A., C.E.
P. A. PETERSON, M. INST. C.E.
W. B. DAWSON, M.A., MA.E.

1.–Shew skeleton diagrams of the principal types of American bridge-trusses.

2.--Make a sketch of a Howe-truss, shewing what members are in compression and what in tension.

Why is a Howe truss a bad arrangement of material for a construction in iron?

3.--Give a cross-section of a safe bridge-floor for a deck Howe truss.

4.--Shew the different kinds of joints made in timber and iron bridges and state why a tension joint is more difficult to make in wood than in iron.

5.--State the advantages and disadvantages of plate-girders.

Give a description of a plate-girder for a short span. How would you prepare an abutment for the reception of such a girder?

6.--State the rules you would be guided by in strengthening a bridge or viaduct against wind-pressure.

7.--Compare the relative advantages of supporting a bridge by two, three or four main girders.

8.--Describe details of attachment of iron floor-beams in riveted and pin-connected bridges, when placed above or below either chord.

Illustrate your answer with sketches.

9.--What are the considerations which govern the position of bridge-platforms relatively to the main-girders?

10.--State the relative advantages of riveted and pin-connected bridge, russes.

BRIDGE CONSTRUCTION. (*Paper II.*)

TUESDAY, APRIL 10TH.—AFTERNOON, 3 P.M.

1.—State the precautions and shew by a sketch the proper proportions to be observed in designing eye-bars and pin-joints.

2.—Design a plate-girder A B of 36-ft. clear span to carry a variable load arranged as follows :—at 6-ft. from A there is a load of 1 ton, at 12-ft. 2 tons, at 18-ft. 3 tons, at 24-ft. 4 tons, and at 30-feet 5 tons. Shew bending moment and shearing-force diagrams. If vertical stiffeners are required by the web, how would you determine their dimensions and distances apart?

3.—A consolidated engine throwing 80,000-lbs. on the eight drivers spaced *five* feet apart, centre to centre, crosses a bridge; how would you estimate the effect upon the main trusses?

4.—The main trusses and floor-beams of a bridge are respectively 16 and 18-ft. centre to centre; the panels are also 18-ft. in length; determine the position of the wheels of an engine similar to the above, (1).-when the stress in the floor-beam is a maximum, (2).-when the stress in the track-stringer is a maximum. Find the bending moment in each case, and make a sketch of the floor-beam.

5.—Make a sketch of a *bent* of a wooden trestle bridge. *Data.*—Height 20-ft., span 15-ft.

6.—Give a description, with all necessary sketches, of a combination wood and iron Fink truss.

7.—What provision is usually made for variations in the length of bridge trusses due to changes of temperature?

8.—Describe in full, giving all the necessary sketches, the manner in which you would build a bridge pier in a part of a river where the bottom consists of rock overlaid with a bed of sand and gravel 15-ft. thick, low-water mark being 30-ft. above the rock.

9.—Discuss the relative merits of girders with parabolic and horizontal flanges.

CIVIL, MECHANICAL AND MINING ENGINEERING

B. A. Sc. and Third Year.

APPLIED MECHANICS, (*Paper I.*)

Thursday, April 5th :—Morning, 9 a.m.

Examiner, ... Henry T. Bovey, M.A., C.E.

(1).—Explain the meaning of the term *Plane of Principal stress*, and prove that at every point within a strained solid there are two such planes.

At a point within a strained solid there is a *tension* of 100-lbs per sq. in. with an obliquity of 45°, upon one plane, and a *thrust* of 50-lbs. per sq. in. with an oblquity of 60°, upon a second plane. Find, (*a*).—the principal stresses, (*b*).—the inclinations of the given planes to the plane of greatest principal stress, (*c*) —the angle between the plane of greatest principal stress and the plane upon which the stress is wholly a shear.

(2).—At a point within a strained solid, p_1, p_2, are the *principal* stresses and r, s, a pair of *conjugate* stresses, θ being their common obliquity; obtain the relations,

$$(p_1+p_2).Cos\ \theta=r.+s,\quad p_1.p_2=r.s.$$

Determine r and s in the Rider of Question 1, θ being 30°.

(3).—At a point within a strained mass, the greatest of two conjugate stresses, having a common obliquity θ, is vertical; determine the inclination of the axis of greatest principal stress to the horizontal.

If $\theta=30°$, and if the principal stresses are both of the same kind, *i. e.*, both thrusts or both tensions, and in the ratio of 3 to 1, shew that the inclination will be 60°.

(4).—The surface of a mass of earth weighing w-lbs. per cubic ft., is inclined at θ to the horizon; the angle of repose of the earth is ϕ; find the total pressure upon a vertical plane extending to a depth x below the surface. Clearly state all the assumptions made in the proof, and point out in what respects they disagree from the results of experience.

Employ the expression obtained for the pressure in designing a masonry wall (weighing 125-lbs. per cubic ft.) which is to be plumb in the rear, 30-ft. high, 3-ft. wide on the top, and to retain soil (weighing 120-lbs. per cubic. ft.) sloping up from the top at the angle of repose. (=30°).

Also, sketch a cross-section which, according to *experience*, will give the wall sufficient stability.

(*The foundation is assumed to be perfectly secure.*)

(5).–Prove that the quantity of masonry in a counterforted wall is always less than that in an equivalent uniform wall.

(6).–t is the thickness of the horizontal bed of a wall, R is the total pressure upon the bed per unit of breadth, x is the distance from the

centre of pressure to the most compressed edge ; shew that f is equal to $\frac{2}{3}\cdot\frac{R}{x}$ $\frac{2R}{t}\cdot\left(2-\frac{3.x}{t}\right)$. according as x <or> $\frac{t}{3}$.

Clearly state all the assumptions made in the proof.

A reservoir wall is 4-ft. wide at the top, has a front batter of 1 in 12, a rear batter of 2 in 12, and consists of masonry weighing 125-lbs. per cubic ft. ; the maximum compression is not to exceed 12,000-lbs. per sq. ft. ; find the limiting height of the wall.,

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B. A. Sc. AND THIRD YEAR.

APPLIED MECHANICS. (*Paper II.*)

THURSDAY, APRIL 12TH.—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., C.E.

1.—Define the term *Resilience.*

A weight of 500-lbs. was being lowered at the rate of 3-ft. per sec. by means of a hand-jigger with a wire-rope 2-ins. in circumference. When the rope had run out 100-ft., the brake was put on and the weight suddenly stopped. Find the resilience. (E = 15,000,000 lbs.)

2.—Explain what is meant by the terms *Shearing Force, Bending Moment, Elastic Moment.*

A beam AE, 25-ft. 6-ins. in the clear, rests upon two supports at A and E in the same horizontal plane, and is divided by the points B, C, D, into the four segments AB = 11-ft. 9-ins., BC = 4-ft. 6-ins., CD = 4-ft. 9-ins., and DE = 4-ft. 6-ins. AB carries a load of 2-tons per lineal ft., and a weight of 15-tons is concentrated at each of the points C and D. Draw *to scale* diagrams illustrating the shearing force and bending moment at points along the beam. (*Neglect the weight of the beam.*)

3.—Shew that the flange stresses at any vertical section of a girder are equal in magnitude but opposite in kind.

The beam in the preceding question is a wrought-iron plate girder. Each of the flanges consists of *two* 12-ins. by ½-in. plates riveted to a 31-ins. by ½-in. web by means of *two* 3-ins. by 3-ins. by ½-in. angles. Determine the position and amount of the maximum flange stresses, taking into account the weight of the girder.

4.—f_1 and f_2 are the unit stresses in the flanges of a girder of span l and depth d. Shew that the central deflection of the girder is, approximately $\frac{l^2.(f_1+f_2)}{8.E.d}$, E being the coefficient of elasticity.

Also shew that if the span is *eight* times the depth, the deflection is equal to the difference of length between the stretched and compressed chords.

5.—A pitch-pine log, resting upon two supports in the same horizontal plane, 10-ft. 9-ins. in the clear, 14-ins. wide, and 15 ins. deep, deflected $\frac{1}{5}$-in. under a load of 20-tons at the centre, and failed under a load of $60\frac{1}{4}$-tons at the centre; determine the coefficients of elasticity and rupture. (*Weight of pitch-pine* $= 45\frac{3}{4}$*-lbs. per cubic ft.*)

6.—A beam is acted upon by forces which are oblique to its direction, but which lie in a plane of symmetry; shew that the total unit stress in any given transverse section at a point distant y from the neutral axis is

$$\pm\frac{C}{A}\pm y.\frac{M}{I},$$

C being the algebraic sum of the components along the beam of all the forces on one side of the given section, M the algebraic sum of the bending moments of all the forces on the same side with respect to the given section, I and A, respectively, the moment of inertia and the area of the section.

A white-pine beam AB, 15-ft. in length and inclined at 60° to the vertical, is supported against a vertical wall at B, and is strengthened by a wrought-iron tie CD from a point C in the beam to a point D in the wall 10-ft. above B; BC is also 10-ft. A weight of 500-lbs. is to be supported from A, determine the dimensions of the beam and tie.

7.—The pressure upon the end of a pillar varies *uniformly;* shew that,

$$\frac{\text{the maximum intensity of stress}}{\text{the mean intensity of stress}}=1+\frac{x_0.x^1.S}{I}$$

x_0, x^1, being respectively, the distances of the centre of pressure, and the most remote points of the section from the centre of figure, and I, S, respectively, the moment of inertia and the area of the section.

The pressure upon the end of a pillar of a regular cruciform section varies uniformly; determine the limiting deviation of the centre of pressure from the axis so that the stress may be nowhere negative, *i.e.*, a tension.

8.—Enunciate Gordon's Formula for the strength of pillars, and explain Rankine's modification of this formula.

The cast-iron pillars for supporting a revolving filter in a refinery are 8-ft. 8-ins. in length and cruciform in section. The dimensions of one pair of arms are $8\frac{1}{4}$-ins. by $2\frac{1}{4}$-ins., and of the other pair $9\frac{3}{4}$-ins. by $4\frac{1}{2}$-ins.; determine the strength of the pillars.

9.—Shew that the strengths of long thin similar pillars are proportional to their sectional areas.

10.—A cylindrical shaft is twisted by a force P at the end of a lever of radius p, prove the relation $P.p=M.\theta.I$, m being some coefficient, θ the

circular measure of the angle of torsion per unit of length, and I the *polar* moment of inertia with respect to the axis. Clearly state all the assumptions made in the proof.

The wrought-iron screw-shaft of a steamship is 75-ft. from thrust-bearing to screw, makes 150 revolutions per minute, and transmits 1,000 I.H.P.; determine its diameter, (1).–if the stress in the metal is not to exceed 9,000-lbs. per sq. in., (2).–if the angle of torsion is not to exceed $\frac{1}{12}°$ per lineal foot.

B.A. Sc. AND THIRD YEAR.

APPLIED MECHANICS. (*Paper III.*)

THURSDAY, APRIL 12TH:—AFTERNOON, 3 P.M.

Examiner,..... HENRY T. BOVEY, M.A., C.E. / W. B. DAWSON, M.A., Ma.E.

1.–The resultant forces at the joints of a polygonal frame are of given magnitude, and are parallel in direction to one and the same straight line; shew how to find the stress in any member of the frame, and determine the magnitude and direction of the stress which is the same for each member.

Four bars of equal weight and length, freely articulated at the extremities, form a rhombus $ABCD$, the angles at A and C being each 60°. The system rests in a vertical plane, with the diagonal AC vertical, the joint A being fixed, and the form of the rhombus is preserved by means of a horizontal string connecting the joints B and D. If W be the weight of each bar, determine, (a).--the reaction at C, (b).–the tension of the string, (c).-the stresses on BC and BA at B, (d).--the stress upon AB at A.

2.–Describe a *king-post* truss, giving *working* sketches of the various joints.

A white-pine triangular truss consists of two rafters AB, AC, of unequal length, and a tie-beam BC. A vertical wrought-iron rod from A, 10-ft. long, supports the tie-beam at a point D, dividing its length into the segments BD= 10-ft. and CD= 26-ft. The load upon each rafter is 300-lbs. per lineal ft.: the load upon the tie-beam is 18,000-lbs. uniformly distributed. Determine the dimensions of the several members.

3.–A frame consists of a horizontal top-beam, l-ft. long, two vertical struts a-ft. long, and three tie-rods, of which the middle one is horizontal and c-ft. long; determine the stresses in the several members when the load, of intensity w, is uniformly distributed over the top beam.

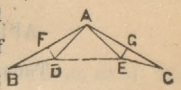
How would you strengthen the truss to resist the action of a live load? If a single weight W move along the beam, find the maximum stresses induced in the several members.

Give working sketches of the various joints.

4.–Describe, *with sketches*, the construction of one bay of a roof of 80-ft span, and give details shewing how the different connections are formed and how provision may be made for changes of temperature.

5.–A roof-truss, of 20-ft. span and 8-ft. rise, is composed of two rafters and a horizontal tie-rod, and carries a load of 500-lbs. per ft. of span; find the stress in the tie-rod. What would be the stress in the tie if it were raised 2-ft. above the horizontal by a vertical rod from the apex?

6.–The figure represents a roof-truss for a span of 60-ft.; the struts DF and EG are each 5-ft.; the angle $ABC=30°$; the dead weight of the roof, including snow, is 9-lbs per sq. ft. of roof surface, and the trusses are 12-ft. centre to centre; rollers are placed at B; determine the stresses in the several members, when a wind blows horizontally with a force of 40lbs. per sq. ft. of vertical surface upon the side AB.



7.–Determine the stresses produced in the members of the truss in the preceding question, when a single weight of 3000-lbs. is suspended from G.

CIVIL ENGINEERING.

B. A. ORDINARY EXAMINATIONS.

APPLIED MECHANICS, (*Paper IV.*)

SATURDAY, APRIL 14TH :—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.A., C.E.
P. A. PETERSON, M. Inst. C.E.

1.–Find the stress in the centre panels of the bottom and top chords of a double-intersection Pratt truss of 154-ft. span centre to centre of end pins, the height from centre to centre of pins being 28-ft., and the panels 14-ft. in length; the panel live-load is 4000-lbs. per lineal ft., the general live load 2500-lbs., and the dead load 1200-lbs.

Also find the maximum stresses in the end verticals and in the 4th and 5th diagonals from the end.

2.–Draw a cross-section and give dimensions of a three-truss double track deck bridge, with the rails placed 5-ft centre to centre and the tracks 13-ft. centre to centre, so that all the trusses may support the same weight when the bridge is fully loaded.

Also find what proportion of the total load each truss will bear when 4-ft. is added to the width of the bridge, the tracks remaining the same distance apart.

3.–Determine the stresses in the several members of an eight panelled Bollman truss, 100-ft. long, and 12½-ft. deep, when carrying a uniformly distributed load of 200,000-lbs., together with a single load of 5000-lbs. at 37-ft. 6-ins. from one end.

If the sectional area of each tie is proportioned to the stress to which it is subjected, shew that the areas of the ties which meet under the first vertical are in the ratio of 7 to 125.

4. The trusses for a roof of 90-ft. span are to be of the type represented by the Fig., and are 20-ft. centre to centre; the angle $A\ B\ C$ is 30°; H, F and K, G are the points of trisection of $A\ B$ and $A\ C$ respectively; the dead weight of the roof, including snow, is estimated at 12-lbs. per sq.-ft. of covered area; a single weight of 2000-lbs. is to be suspended from H; rollers are placed at B; the roof is to be designed to resist a normal wind pressure of 26.4-lbs. per sq. ft. of roof surface on one side; determine the dimensions of the several members which are all to be of wrought-iron.



5.–A bow-string girder, with isosceles bracing, of 100-ft. span, and 12-ft. 6-ins.d eep at the centre, has its horizontal chord in compression. and the bow, which is an arc of a circle, in tension; there are 10 panels; determine the stresses in the members met by a vertical section in the 12-th half panel.

Data:–Dead-load per lineal ft.=900-lbs., live-load per lineal ft =2750-lbs., the panel live-load per lineal ft.=4000-lbs.

6.–The lattices of an open-webbed girder of depth h are riveted to angle-irons which form part of the flanges. Shew that the number of rivets of diar. d required between two consecutive apices to prevent the longitudinal slipping of the angle-irons, is $\frac{14}{11} \cdot \frac{1}{h.d^2} \cdot \frac{S}{f} S$ being the shearing force between the two apices, and f the safe shearing unit-stress.

The platform of a single track bridge of 80-ft. span is supported upon the top chords of two Warren girders; the bracing of each girder consists of ten equilateral triangles, the dead weight of the bridge is 900-lbs. per lineal ft., the general live load is 2750-lbs. per lineal ft., and the panel live-load is 4000-lbs. per lineal ft.; the braces are riveted

to angle-irons; determine the number of $\frac{3}{4}$-in. rivets required to connect the angle-irons with the flanges, in the first and fourth bays, allowing a shearing stress on the rivets of 10,000-lbs. per sq. in.

7.–Shew by a sketch the *best arrangement* for the links in the lower chord of a Phœnix truss; the links are to be each 6-ins. wide and 1-in thick; the stress on one side of the pin is 240,000-lbs. and on the other 180,000-lbs., allowing a tensile stress of 10,000-lbs. per sq. in. in the iron.

CIVIL ENGINEERING.

B. A. Sc. GRDINARY EXAMINATION.

APPLIED MECHANICS. (*Paper V.*)

MONDAY, APRIL 16TH:—MORNING, 9 A.M.

Examiner,..... HENRY T. BOVEY, M.A., C.E.

1.–A bridge platform is suspended from cables by vertical rods; supposing that the load is uniformly distributed per horizontal unit of length, shew how to find the form of the curve assumed by each cable, its parameter, its approximate length, and the tension at any point.

2.–A bridge consists of a central span of 180-ft., and two side-spans each of 135-ft.; the platform is suspended by vertical rods from four iron-wire cables, two on each side; each pair of cables passes over two abutments and two piers, the former 36-ft. and the latter 60-ft. above the ground surface; the dead load and a given proof load subject the bridge to uniformly distributed load of 4-tons per lineal foot, and thus produce in each cable at the piers a stress of 360-tons; determine, (*a*).–the elevation of the lowest point of the cables in each span above the ground surface, (*b*).–the horizontal pull at the lowest point, (*c*).–the dimensions and weight of the cables, which are of uniform section, (*d*).–the alteration in the length of the cables and the central depression of the platform in each span due to a change of 60°F. in the temp., (*e*).–the crushing and bending efforts at the foot of a pier.

What should be the height of the piers if the lowest points of the cable in the several spans are to be in the same horizontal plane?

3.–Design a pair of stiffening trusses, *hinged* at the centre, for the centre span of the above bridge, to counteract the effect of a live load of 1200-lbs. per lineal ft.

4.–Explain what is meant by an *equilibrated* polygon, and give the reasoning by which it may be shewn that any series of loaded voussoirs will be in equilibrium when a reaction of known magnitude and direction is applied at one abutment, provided the equilibrated polygon required by this reaction and the given loads can be drawn so that its sides cut all the joints within the ring (or within the middle third where strength is an element of the question) at an angle greater than the complement of the angle of repose for the material used.

5.–Give a practical investigation of the stability of a given arch under a given load.

6.–Explain the use of the *transformed catenary*.

The span of a given arch is 30-ft., its rise 7-ft. 6-ins.; and the height of masonry over the crown is 12-ft.; the weight of the material of the arch is 136-lbs. per cubic ft., determine the transformed catenary, and find the amount and direction of the thrust at the abutments.

7.–Shew how to find the bending moment at any point of an arched rib, (1).– when hinged at the ends, (2).–when absolutely fixed at the ends. Also, in the case of a given rib hinged at the ends, deduce the condition defining the *actual* linear arch.

An arched rib of a uniform double-tee section $2\frac{1}{2}$-ft. deep, of 80-ft. span and 16-ft. rise, is loaded with *five* weights each of 2-tons at the end of the 1st, 2nd, 3rd, 4th and 5th division from the left support of *eight* equal horizontal divisions.

Draw the linear (*actual*) arch, and determine the maximum flange stress. (*Neglect the weight of the rib*).

8.–Shew that the deflection of a loaded arched rib of span $2c$ and rise k is approximately, $\frac{k^2 + c^2}{k} \cdot \frac{f}{E}$, f being the intensity of stress due to the change in the length of the axis, and E the coefficient of elasticity.

9.–Define the term *reciprocal figures* and state the conditions of reciprocity.

What is the *mechanical* property of reciprocal figures?

CIVIL, MECHANICAL AND MINING ENGINEERING.

B. A. Sc. ORDINARY EXAMINATIONS.

HYDRAULICS. (*Paper I.*)

FRIDAY, APRIL 6TH:—MORNING, 9 A.M.

Examiners, ... { HENRY T. BOVEY, M.A., C.E.
W. B. DAWSON, M.A., MA.E.

1.--A force-pump has a solid cylindrical plunger of 10-ins. diameter and 22-ins. stroke. Find the number of strokes per minute that it may deliver 4000-gallons per hour.

2.--Enunciate and prove Torricelli's Theorem.

A tank discharges through a circular opening, 1-sq. in. in area, under a constant head of 10-ft. Determine the volume discharged per second, and also find the proportion in which this can be increased by fitting a short length of pipe to the opening.

3.--A cubical vessel, whose volume is 1-cubic ft., is filled with mercury. A square opening, 1-sq. in. in area, is made in one of the corners, and is bounded on two of its sides by the bottom and a side of the vessel. Find the time of discharge.

4.--The channel of an aqueduct has an 18-ft. bottom width, side slopes of $1\frac{1}{2}$ to 1, and 10-ft. depth of water. In passing through rock, the depth of water remains the same, but the side slopes are made 1 to 4. Find the bottom width which will give the same hydraulic mean depth. Also determine the flow, the longitudinal fall being 1 in 2000.

5.--Obtain an expression for the discharge over a weir, (1).--neglecting the velocity of approach, (2).--taking the velocity of approach into account.

A dam 4-ft. high is built across the rock section in the preceding question. What will be the increased depth of the water?

6.--State Francis' experimental results as to the effect of end contractions upon the flow over weirs, and explain to what extent these results are applicable.

7.--Describe, *fully*, a method of measuring the flow of a stream. Give an example.

8.--State the results of Darcy's experiments on the flow of water through pipes.

Two points *A* and *B*, on different sides of a valley, are to be connected by a 12-ins pipe in the form of an inverted syphon. The water flowing through the pipe will be conveyed away by an aqueduct of rectangular section, 3-ft. wide, and running full to a depth of 2-ft. with a fall of 1 in

1000. The height of A above a given datum line is 50-ft.; the chainage from A to a point B' very near B is 1000-ft.; the height of B' above datum is 48-ft.; the slope of BB' is 45°; find the height of B above datum. $\left(\frac{1}{b}=3234.67 \text{ for pipes in use}\right)$

9. A 24-ins. pipe, 5-miles long, connects a reservoir in which the water stands at a height of 300-ft. above a given datum line, with a reservoir in which the water stands at a height 150-ft. above datum. A second 24-ins. pipe, 2-miles long, connects a third reservoir in which the water stands at a height of 225-ft. above datum, with the first pipe at two miles from the upper end. Determine the distribution.

Also find the height to which the water will rise in a supply pipe taken one mile from the lower end, and the pressure for which the main should be designed at this point, which is 20-ft. above the level of the lower reservoir.

10. Discuss the influence of the longitudinal profile of a pipe upon the internal pressure.

CIVIL, MECHANICAL AND MINING ENGINEERING.

B. A. Sc. ORDINARY EXAMINATIONS.

HYDRAULICS. *(Paper II.)*

FRIDAY, APRIL 6TH:—AFTERNOON, 3 P. M.

Examiners,..... { HENRY T. BOVEY, M.A., C.E. / W. B. DAWSON, M.A., M.A.E.

1.–State the formula giving the impulse of an unlimited stream upon a solid which is partially or wholly immersed in it.

Shew that the efficiency of a paddle-steamer may be expressed in the form $\frac{K'.S}{K.A+K'.S}$, S being the total section of the two paddles which simultaneously strike the water, A the transverse area of the steamer at midships, K and K' certain coefficients.

Explain why the haulage of a boat along a canal is more economical in point of power than propulsion by oars, paddles, or screw.

2.–An undershot wheel with plane floats works in a rectangular channel with horizontal bed; determine its efficiency, and shew that it can never exceed $\frac{1}{2}$.

A wheel of this class is 12-ft. in diar., and makes 5-revolutions per minute; the fall is 3-ft.; the supply of water is 15-cubic ft. per second,

its velocity before entering the wheel being twice that of the wheel; determine the mechanical effect of the wheel.

3.–Design the wheel-race for a Poncelet undershot-wheel.

4.–Determine the mechanical effect of a breast-wheel when the part due to the weight of the water is wholly lost by its escape through the free spaces, and also find the velocity with which the water should enter the buckets so that the effect might be a maximum.

5.–Describe the construction of an overfall sluice.

10-cubic ft. of water per sec. with a fall of 8-ft. are brought by an overfall sluice, on a breast wheel revolving with a linear velocity of 5-ft. per second; the water enters the buckets with a velocity of 10-ft. per second; the depth of the shrouding is 12-ins.; determine the height and breadth of the lip, the slope at the end of the guide-curve, and the radius of the wheel so that the water may enter tangentially.

If the diameter of the wheel is limited to 20-ft., find the deviation of the direction of motion of the water from that of the wheel at the point of entrance.

6.–The curved bucket of a turbine forms a channel 12-ins. long by 2-ins. wide by 2-ins. deep, and its axis is the arc of a circle of 9-ins. radius. The bucket makes 80-revolutions per minute about an axis perpendicular to its direction, and delivers 2-cubic ft. of water per minute. Find, (1).–the loss of head due to the curvature of the bucket, (2).–the work due to centrifugal force.

The distances from the axis of the outer and inner edges of the bucket are respectively 30-ins. and 20-ins.

7.–Give the principal dimensions of a parallel-flow turbine for a fall of 15-ft. with 8-cubic feet of water per sec.; the common width of the orifices is 6 ins.; the ratio of the external to the internal diameter is $2\frac{1}{2}$; the efficiency is $\frac{3}{5}$; the vane angles at the points of ingress and egress are respectively 75° and 30°. Also make allowance for the loss of head due to friction and curvilinear motion, &c.

8. Shew that the useful effect of a reaction wheel increases with the linear velocity of the end of the discharging tube.

Will the efficiency necessarily increase?

FIRST YEAR.

CHEMISTRY,

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,..... ....B. J. HARRINGTON, B.A., Ph.D.

1. Give distinctive tests for Ortho- Pyro- and Metaphosphoric Acids.

2. What are the principal characteristics of metals? Why are Antimony, Arsenic and Bismuth often classed with the non-metallic elements?

3. An excess of Barium Chloride was added to a solution containing Sulphuric Acid. The resulting precipitate was collected and weighed 3. 5 grammes. How much Sulphuric Acid was present in the solution?

4. Give the composition of the principal ores of iron, and describe their reduction in the blast-furnace.

5. Give tests for distinguishing (*a*) between Ferrous and Ferric Salts, (*b*) between Mercurous and Mercuric Salts, and (*c*) between Stannous and Stannic Salts.

6. Describe fully the preparation and properties of Marsh Gas.

7. Distinguish between open and closed chains, giving examples.

8. What is $C_6H_8O_7$, and how is it prepared on the large scale?

9. How may starch be converted (*a*) into Dextrin, (*b*) into Glucose? How may Glucose be converted into Alcohol?

10. Name the substances indicated by the following formulæ:—$CHCl_3$, C_6H_6, CH_2O_2, $C_3H_5(NO_2)_3O_3$ and H_4SiO_4.

SECOND YEAR MINING.

PRACTICAL CHEMISTRY.

MONDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,..... .....B. J. HARRINGTON, B.A., Ph D.

1. What are the principal points to be noted when substances are heated in closed tubes?

2. What are the ordinary uses of the following reagents?—$SnCl_2$, $Pb(C_2H_3O_2)_2$, $BaCO_3$, H_2SiF_6, $(H_4N)_2C_2O_4$, $KCNS$.

3. Describe the preparation of Absolute Alcohol.

4. A solution contains Calcium, Magnesium, Potassium and Sodium. Describe their detection and separation.

5. Describe any good method for the separation of Arsenic, Antimony and Tin.

6. Describe the qualitative analysis of an alloy containing Copper, Lead, Zinc and Iron.

7. Express by equations the changes which take place when Ammonium Sulphide is added (*a*) to a solution of Ferric Chloride, and (*b*) to a solution of Aluminium Chloride.

8. Describe the detection of Aluminium in presence of Chromium, and of Nickel in presence of Cobalt.

9. Give an outline of the course to be followed in the detection of Inorganic Acids in soluble substances.

THIRD YEAR.

THEORETICAL CHEMISTRY.

FRIDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiner,..... B. J. HARRINGTON, B.A., PH. D.

1. What evidence is there of the existence of Hydroxyl in the so-called Hydroxyl Acids?

2. What is the characteristic group of Tertiary Alcohols and of Aldehydes? Explain the constitution in each case.

3. Distinguish between simple and compound Ethers, and state what you know concerning the constitution of each class of bodies.

4. What are Nitriles, and in what respects do they differ from Carbylamines?

5. What two views have been held with regard to the constitution of Phosphorous Acid? What facts are advanced in favour of each view?

6. Distinguish between normal Butane and Trimethylmethane. What four kinds of substitution products may be derived from these two bodies?

7. Explain the constitution of Pyrophosphoric and Pyrosulphuric Acids.

8. Give the commonly-accepted views with regard to the constitution of Benzine.

THIRD YEAR.

MINING.

THURSDAY, APRIL 19TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. Explain the differences frequently observable in the character and thickness of metalliferous veins at different depths from the surface.

2. Describe fully the manufacture of Nitroglycerine, Dynamite, and Gun-cotton. Give also the properties of each.

3. Describe the preparatory working and exploitation of a narrow lode with an underlie of 20°.

4. Explain the working of a thick lode by the method of Cross-cuts and Filling-up.

5. Distinguish between Long Wall and Long Pillar work.

6. Distinguish between Bucket Lifts and Plunger Lifts, describing each fully.

7. What is a Safety-Cage? Describe the principal form used on the Comstock Lode.

8. Give an outline of the methods commonly employed for raising ores in shafts.

9. What are the principal points to be attended to in the distribution of Air-currents in Collieries?

10. Explain the following terms:—Creep, Cleat, Attle, Lagging, Covered-binding, Sump, Wedging-Curb, Room and Rance.

N.B. The answers should be illustrated, as far as possible, by free-hand drawings.

THIRD YEAR.

MINERALOGY AND LITHOLOGY.

FRIDAY, APRIL 13TH:—AFTERNOON, 2 TO 5.

Examiner,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph. D.

1. Describe Limonite, Pyrite, and Pyrite, and Pyrrhotite.

2. Describe Ashaltum, Albertine and Graphite, stating what you know concerning the origin of each.

3. Give the names and composition of the Silicates which enter largely nto the composition of rocks.

4. Distinguish (*a*) between Essential and Accessory constituents of rocks, (*b*) between Acidic and Basic rocks, and (*c*) between Classic and Crystalline rock.

5. Explain the following terms:—Breccia, Tuff, Plagioclase, Trichite, Macroscopic.

6. Name the more important Volcanic rocks, and describe two of them.

7. Describe Gneiss, Diorite and Argillite, giving the supposed origin of each.

8. Explain the use of the microscope in the study of rocks.

9. Name and describe carefully the rock-specimens exhibited. State also the geological relations of each.

THIRD YEAR.

MINERALOGY.

THURSDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph.D

1. Explain the following terms:—Parameter, Primary Form, Tetartohedrism, Principle of Rationality.

2. Distinguish between Trigonal and Tetragonal Tris-octahedrons, and point out the relationship between these and the corresponding hemihedral forms.

3. Explain the following expressions:

$$a : 2a : 2a : \infty c.$$
$$a : na : pa : mc.$$

Why must n in the latter be less than 2 and greater than 1?

4 Characterise the Monoclinic System, and explain the notation of the planes.

5. Explain the formation of Pseudomorphs, giving examples. Distinguish also between Paramorphs and Pseudomorphs.

6. What are the principal imperfections observable in crystals of minerals?

7. Argentite, Graphite, Corundum, Spinel, Pyrite, Zincite. Arrange these Minerals (*a*) in the order of their hardness, and (*b*) in the order of their specific gravity, beginning with the lowest. State which are fusible and which infusible.

8. What results are obtained from each of the following Minerals by heating (*a*) on charcoal and (*b*) in the closed tube?—Stibnite, Arsenopyrite, Cinnabar, Tetrahedrite, Pyrite, Fluorite.

9. How would you distinguish Millerite from Marcasite, Tourmaline from Hornblende, Chromite from Franklinite, Apatite from Pyroxene!

10. Give the blowpipe characters of Barite, Ilmenite, Sphalerite, Molybdenite and Chalcopyrite.

11. Describe the specimens exhibited.

N.B. Students taking the additional department may select seven of the above questions and six of the specimens.

B. A. Sc. and Third Year, ADVANCED COURSE.

APPLIED MECHANICS. (*Paper I.*)

FRIDAY, APRIL 20TH, MORNING 9 A. M.

Examiner,.....HENRY T. BOVEY, M.A., C.E.

(1).–A heavy vertical bar of *uniform strength* and of weight W_1 is fixed at its upper end and carries a weight W_2 at the lower end, determine the *extension* and the *work of extension*, f being the safe unit-stress and E the coefficient of elasticity.

(2).–Determine the general equations of equilibrium of a horizontal girder supported at its two ends and subjected to a load of *continuously* varying intensity.

Explain how these equations may be applied when the load consists of a number of finite weights concentrated at different points.

An elastic beam having its two ends absolutely fixed in the same horizontal plane, is loaded in such a manner that the deflection at any point is directly proportional to the intensity of the load at that point; determine the differential equation of the neutral axis of the beam, and obtain a solution of such equation.

(3).–Discuss the form assumed by the neutral axis of a horizontal girder OA, of length l, resting upon supports at O and A, and loaded with a weight P at a point B, distant r from O.

A cast-iron girder 11-ft. 7-ins. in the clear and 10-ins. deep at the centre, has its ends resting upon supports in the same horizontal plane; the bottom flange is 10-ins. by $1\frac{1}{4}$-ins., the top flange $2\frac{1}{4}$-ins by $\frac{7}{8}$-in., and the web is $\frac{3}{4}$-in. thick; a load of $7\frac{1}{2}$-tons is concentrated at $3\frac{3}{4}$-ft. from each end; determine, (*a*).–the deflection at the centre (*b*).–the deflection at the loaded points, (*c*).–the slope of the neutral axis at the loaded points.

(4).–Show that in bending a beam, the work done between any two given sections of abscissæ x_1, x_2, is $\frac{1}{2.E.I}\int_{x_1}^{x_2} M^2.dx$,

E being the coefficient of elasticity, I the moment of inertia (*assumed uniform*), of the beam M the bending moment at any point of the beam between the given sections.

The floor-beams of a double-track bridge are 26-ft. in the clear, and rest upon the bottom flanges of two main-girders; the tracks are 13-ft centre to centre, and the rails are 5-ft. centre to centre; find the work done in bending a floor-beam under a load of 20,000-lbs. thrown by a consolidated engine upon a pair of drivers.

(5).—State the advantages and disadvantages of continuous girders.

(6).—Enunciate the *Theorem* of *three* moments, (*a*).—when each span of the girder is loaded uniformly, (*b*).–when a number of weights are concentrated at different points.

The floor-beams of a double-track deck-bridge are supported by *three* main trusses. The tracks are *a*-ft. centre to centre, the rails are *b*-ft. centre to centre; determine the distance from an outside truss to the nearest rail so that each truss may bear the same weight when the bridge is fully loaded.

(7).—If swing-bridges have two points of support at the pivot pier, and if the intensity of the load between these points is *nil*, shew that no hammering of the ends can ever take place.

(8).—A horizontal girder of *uniform strength*, of length, l, and constant depth d, rests upon two supports, and carries a uniformly distributed load of intensity w, producing a unit-stress f at every point of the material. Shew that the central deflection is $\frac{w^1}{4}.\frac{f}{E}.\frac{l^2}{d}$, and that the work done in bending the beam is $\frac{w}{12}.\frac{f}{E}.\frac{l^3}{d}$.

B. A. Sc. Advanced Course.

APPLIED MECHANICS. (*Paper II.*)

Monday, April 23rd Morning 9 a. m.

Examiner, ... Henry T. Bovey, M.A., C.E.

(1).–A long strut of length l, and with *both* ends *fixed*, is subjected to pressure in the direction of its length; shew that $4.E.I.\frac{\pi^2}{l^2}$ is the least pressure that will bend the strut laterally.

Clearly state all the assumptions made in the proof.

If the strut is a lattice-bar of rectangular section, determine the maximum value of the ratio of the length to the least transverse dimension, E being 25,000,000-lbs., and the safe inch-stress 8000-lbs.

(2).–Discuss Weyrauch's theory of the resistance to buckling.

A lattice-bar 7-ft. long is subjected to stresses varying between a maximum compression of 25,000-lbs. and a maximum tension of 9000-lbs.; calculate the proper sectional area, allowance being made for buckling.

(3).–AB is a continuous girder of three spans, $AC (=2a)$, $CD (=5a)$, and $DB (=2a)$, resting upon abutments at A and B and upon piers at C and D. The centre span is hinged at points E and F where $CE=2a=DF$. The intensity of the uniformly distributed load is w_1 upon AE and BF, and w_2 upon EF.

Draw diagrams shewing the bending moment and shearing force at points along the girder.

(4).–The axis of an arched rib of uniform section is a semicircle, and the rib is hinged at both ends; shew that a change of 60° F. from the mean temperature will produce upon the rib a horizontal thrust of $\frac{3}{4}.I$-lbs., approximately, I being the moment of inertia of the section

($E=22,000,000$-lbs., and coeff. of expansion per degree of Fahrenheit$=.0000067$).

(5).–An arched rib springing from two abutments is subjected to a vertical load; determine the change in the span, in the vertical distance between the two ends, and in the slope between the same points.

Also, deduce an expression for the bending moment and shearing force at any point of the axis of the rib.

(6).–An arched parabolic rib of uniform stiffness and span l is hinged at the abutments and carries a *fixed* vertical load of w-lbs. per lineal ft.; discuss the conditions of equilibrium of the rib when a *live*-load of w^1-lbs. per horizontal unit of length covers a portion $r.l$ at one end.

Apply to the case of a wrought-iron double-tee rib 30-ins. deep, of 100-ft. span and 20-ft. rise.

B.A. Sc. ADVANCED COURSE.

STEAM.

THURSDAY, APRIL 26TH :—MORNING, 9 A.M.

Examiner,..... HENRY T. BOVEY, M.A., C.E.

1. Prove from first principles that the ratio of the specific heats at constant volume and constant pressure of a substance is equal to the ratio of the elasticities at constant temperature and when no heat escapes.

2. Find the work done in a stroke of a compound engine, in which one piston rod passes through the high and low pressure cylinders, when the steam in the high pressure cylinder is cut off at a given fraction of the stroke, supposing the steam to expand adiabatically.

If the steam expands x times, and if the piston-area of the small cylinder is variable, that of the large cylinder being constant, shew that the initial pressure upon the two pistons is a minimum, when r, the rate of expansion in the small cylinder, satisfies the relation

$$r^n - n.x.r + n - 1 = o$$

$p.v^n$ = a const., being the equation of the curve of expansion.

3. If r be the latent heat of evaporation of a liquid at the absolute temperature T, and if C and H be respectively the specific heats of the liquid and vapour at the point of saturation. Shew that,

$$\frac{dr}{dT} - \frac{r}{T} C + H = O.$$

Enunciate Watt's law as to the heat of evaporation of water, and compare it with the results of Clausius' investigations on the theory of the steam engine.

Explain the meaning of the statement that for steam H is negative, and shew that, according to Clausius, H is negative for all temperatures less than $523° \, 2C$.

4. Prove that where the only variable loss is due to back pressure and to friction of the engine, the rate of expansion should be such as to cause expansion nearly to the mean pressure line of the engine diagram taken without load.

5. If the quantity of heat required to change the temperature of a unit of weight of any substance from t to $t + dt$ and the volume from v to $v + dv$, be $dQ = M.dv + N.dt$, shew that the *First* and *Second* laws of Thermodynamics may be expressed analytically by the equations

$$\frac{dM}{dt} - \frac{dN}{dv} = \frac{M1}{TJ}\frac{dp}{dt}$$
$$\frac{dN}{dv} = \frac{T}{J}\cdot\frac{d^2p}{dt^2},$$

T being the absolute temperature corresponding to t.

6. If superheated steam expands so that its *interior* work is *constant*, shew that the curve of expansion is an equilateral hyperbola, and obtain an expression giving the final temperature.

A unit of weight of pure saturated steam, at 4 atmospheres, expands *in vacuo* to *three* times its volume; will the steam in its final state be superheated?

7. Give the theory of the Jet Condenser, and explain its practical application.

B.A. Sc. ADVANCED COURSE.

HYDRAULICS.

WEDNESDAY, APRIL 25TH:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., C.E.

1.–What are *equivalent* lines of piping?

A line of piping consists of a number of lengths of different diameters; if the losses of head due to the variations of diameter be neglected, shew that the discharge at the end is the same in whatever order the several lengths may be placed.

2.–A pipe of given length and radius gives a certain discharge, shew that the discharge may be increased nearly 40 per cent. by doubling the diameter for the second half of the length.

3.–A pipe gives a total *end service* Q'; if Q_e be a sufficient end service, how much is available for a uniform *way-service?*

4.–A basin in the form of half a sphere, 12-ins. in diar., has an orifice of 1-sq. in. sectional area at the lowest point; if water flows into the basin from two pipes at the rate of 1-cubic ft. per minute, find the greatest height to which the water will rise in the basin, and also the time of rising to this height.

5.–Shew that the ideal longitudinal section to which actual rivers approximate more or less, is a parabola, having its axis horizontal, and its vertex at the source, *if it be assumed*, (1).–that the resistance of the bed to scour is uniform, (2).–that the velocity of the river is constant from source to mouth, (3).–that all transverse sections of the river are similar, (4).–that the discharge increases uniformly from source to mouth, in consequence of the supply from affluents.

6.–A conoidal tube 12-ins. in length has a convergence of 10°, and its least transverse section is $1\frac{1}{2}$-ins. in diar.; determine the discharge under a head of 16-ft.

7.–Shew that the efficiency of a centrifugal pump, in which the water enters the wheel *radially*, is $\frac{g.H}{v_w.rA}$, H being the actual lift of the pump, A the angular velocity of the disc, r the external or internal radius, and v_w the corresponding whirling velocity.

8.–Determine the centrifugal force of a vortex formed in a cylindrical vessel by revolving about the axis of the vessel.

Shew that the lift of a centrifugal pump, without altering the speed or work expended in the pump, may be increased by the addition of a vortex.

9.–Remark upon the use of involute vanes for centrifugal pumps.

10.–Give the theory of the centrifugal pump with whirlpool chamber in normal condition of working.

How is the discharge affected when the speed varies?

EXAMINATION FOR THE DEGREE OF MASTER OF ENGINEERING, 1882.

I. APPLIED MECHANICS.

Examiners,.... { HENRY T. BOVEY, M.A., ASS. MEMB. INST. C.E.
JOHN KENNEDY, M. INST. C.E.

(1).--Shew that, (*a*).--the *sudden* application of a load to a structure produces a greater deflection than the *gradual* application of the same load; (*b*).--the deflection of a beam in which the elastic limit is not exceeded is *twice* as great from the suddenly applied load; (*c*).–that the capability of a rectangular beam to resist a blow in a direction transverse to its length is independent of the proportion of the depth to the breadth.

(2).–Describe Wohler's experiments on the resistance of materials to unlimited repetitions of a load which fluctuates within given limits or which is continually reversed.

Explain any formula which has been adopted to represent the results of such experiments, and illustrate by an example.

(3).–Explain what is meant by the flow of solids, giving examples of mechanical operations in which it occurs.

Find the law of variation of the stress within a thick hollow cylinder under internal pressure, the stresses being supposed so great that the metal flows freely.

(4).–Determine the breadth of timber joists l-ins long, d-ins deep, and x-ins. centre to centre, (*a*).–for a wooden platform the gross load being 150-lbs per square foot; (*b*).–for a wooden platform with a stone or gravel roadway, the gross load being 250-lbs. per square foot; (*c*).–for a railway platform with a single or double track, W being the heaviest load on a pair of drivers and k the gauge of the rails.

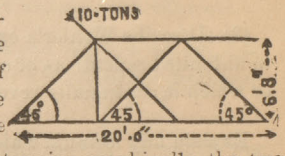
(The safe stress in the timber = 1000 lbs per sq. in.)

(6.)–Enunciate and prove Gordon's formula, and explain how the formula should be modified when the weight upon the pillar causes the stress in any transverse section to *vary uniformly*.

A solid round cast-iron pillar is 20-diars. in length; shew that its strength when loaded so that the stress in any transverse section *varies uniformly*: its strength when the load is uniformly distributed over the whole section : : 21 : 41.

(7.)–The bracing of a lattice girder consists of a single system of triangles in which one of the sides is a strut and the other a tie inclined to the horizontal at angles of α and β respectively; in order to give the strut sufficient rigidity its action is made k-times that indicated by theory (k being $<$ one), shew that the amount of material in the strut and ties is a minimum when $\frac{tan\alpha}{tan\beta}=k$.

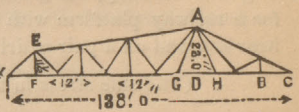
(8.)–The inclined bars of the trapezoidal truss represented by the Fig. make angles of 45° with the vertical; a load of 10 tons is applied at the top joint of the left rafter in a direction of 45° with the vertical; draw a frame diagram, and determine graphically the two re-actions, assuming the one at the right to be vertical; also, by means of a reciprocal figure, find the stresses in all the pieces of the frame.



Explain in what manner the right hand re-action may be made approximately vertical.

(9.)–The flange of a uniformly loaded girder is to consist of two plates, each of which extends over the middle portion of the girder for a certain required distance, and of a pair of angle irons; shew that the greatest economy of material is realized when the lengths of the plates and angle-irons are in the ratio of 12 : 18 ; 23, and when the areas of the plates are in the ratio of 4 : 5.

(10.)–The platform of a swing bridge is supported by two trusses of the type represented by the Fig.; the clear span $K\,G$ is 84′0″ the tail-end $H\,C$ is 36′ 0″ the bearings $G\,H$ is 18′ 0″, the depth $A\,D$ is 23′0″, the depth $E\,F$ is 11′6″; ballast is spread over the 12-ft. panel $B\,C$. Shew how to determine the stresses in the several members of the truss.–(*a*).–when the bridge is open (*b*).–when the bridge is closed and subjected to a rolling load of 2500 lbs. per lineal foot.



Find the weight of the ballast.

II.—BRIDGE CONSTRUCTION.

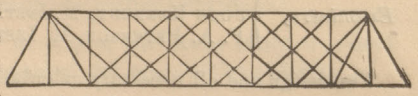
Examiners, ... { HENRY T. BOVEY, M.A., M. Inst., M.E.
JOHN KENNEDY, M. Inst. C.E.
P. A. PETERSON, M. Inst. C.E.

(1).–Carefully discuss the relative merits of a riveted lattice girder and a lattice girder constructed on the pin principle.

(2).–The tensile and compressive unit stresses in the chords of a bridge truss of span l and uniform depth d are nowhere to exceed f_1 and f_2 respectively; shew that the greatest central deflection is approximately $(f_1 + f_2) \cdot \frac{l^2}{8.E.d}$.

Hence shew that if the span is eight times the depth and if the grade line is to be truly horizontal when the bridge is loaded, the length of the top chord should exceed that of the bottom by an amount equal to the camber.

(3).–The platform of a double-track railway bridge is supported from the bottom chords of two trusses braced and counterbraced as in the Fig. The length of each truss is 184ft 2-ins., its depth is 34-ft., and it is designed to carry per lineal ft. a live load of 2250-lbs. and a dead load of 1100-lbs.; determine the maximum stresses in all the members of the *fourth* panel met by a vertical plane.



Design a cross-tie for the bridge, the live load for the floor system being 8000-lbs. per lineal ft.

(4).–A_1, A_2, and a_1, a_2, are, respectively, the sectional areas and inclinations to the vertical of the two ties which meet at the foot of a post in a Bollman truss; if the sectional area of each tie is proportioned to the stress to which it is subjected, shew that

$$A_1 . Cos^2 a_1 . sin\, a_2 = A . Cos^2 a_2 . Sin\, a_2 .$$

(5).–Mention the advantages and disadvantages resulting from the adoption of continuous girders for the bridge to be built over the river of which the accompanying plan is a cross section.

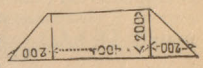
(6).–What are the members of a deck Pratt truss which require to be considered in the calculations for wind pressure?

(7).–State whether you would adopt two, three, or four trusses for a 300-ft. double track deck bridge. What considerations would guide you in coming to a conclusion?

(8).–Shew how you would arrange the floor system for both single and double deck spans, and give your views as to the advisability and economy of using the top chords as supports for the cross-ties.

(9).–The platform of a suspension bridge is stiffened by a girder hinged at the piers and centre; the cables hang in a parabola, and the weight of the chains, suspending rods, and platform, may be treated as uniformly distributed; determine the greatest bending moment on the girder and load on the cable when a train crosses the bridge.

(10).–How would you construct the erecting platform for a bridge as per diagram, in which no intermediate supports are obtainable in the centre span.



III. THESIS.

Examiners, { HENRY T. BOVEY, M.A., Ass. MEMB. INST. C.E., &c
JOHN KENNEDY, M. INST. C.E.
P. A. PETERSON, M. INST. C.E.

The design and all necessary calculations, with a specification and estimate, for a combination deck bridge across the Des Moines River on the St. Louis, Des Moines and Northern Narrow Gauge Railway.

Faculty of Medicine.

OBSTETRICS.

THURSDAY, 22ND MARCH, 1883.

Examiner,.....D. C. McCALLUM, M.D.

1. Give the characters separately of the Rachitic and Malacosteon pelvis, and mention the difficulties which each presents to the passage of the child.

2. Describe the mechanism of labor in a pelvic presentation.

3. Give the causes and treatment of Abortion.

4. How would you treat a case of post-partum hemorrhage?

5. Under what conditions is Rupture of the uterus likely to occur? describe the symptoms and treatment of this complication of labor.

6. Describe the different methods of performing version of the child.

7. What are the causes of after-pains, and how may the pains best be relieved?

8. Describe the changes thai take place in the structures of the uterus during pregnancy and after delivery.

CHEMISTRY.

SESSION 1882-83.

Examiner,.....G. P. GIRDWOOD, M.D., M.R.C.S. ENG.

1. Describe the terms, latent heat, specific heat, atomic heat, radiation, conduction, conviction.

2. What is meant by polarization of light; by what means may it be effected?

3. Describe the mode of preparing Iodine, giving formulæ for the decompositions, a description of Iodine, and its principal compounds.

4. How does nitrogen occur? Describe its mode of preparation, qualities and principal compounds with O.

5. Describe the manufacture of carbonate of soda and bicarbonate.

6. What is meant by Marsh's test and Reinsch'st ests, to what metals are they each applicable? How can you determine which is present?

7. Define the terms saturated and unsaturated hydrocarbon.

8. How can an alcohol be prepared from a hydrocarbon?

EXAMINATION FOR THE SUTHERLAND MEDAL.

SESSION 1882-83.

Examiner,.....G. P. GIRDWOOD, M.D.

1. What will be the weight of a decilitre of Hg., specific gravity of which is 13·596?

2. What are the different systems of crystallization, the action of each form on light? How are they affected by heat?

3. Write out the formulæ for the different classes of oxides, and describe their action with $H_2 So^4$ — HCl — H_2O.

4. Describe the changes which take place in the separation of iron from its ore.

5. How is aluminium obtained?

6. Show the relation existing between an alcohol, aldehyde, and an acid.

7. What are the differences between a primary, a secondary and a tertiary alcohol, also a monatomic, diatomic and triatomic alcohol?

8. What is a compound ether? show the formation by symbols.

9. What is the difference between an amine and an amide?

10. How is nitrogen estimated in an organic analysis?

PRACTICAL.

What are the substances A. B. C·

What are the salts in solutions A. B. C.

PRIMARY EXAMINATION.

INSTITUTES OF MEDICINE.

MARCH 20TH :—10–12 A.M.

Examiner,..... ..... PROF. OSLER, M.D.

1. Describe the carbo-hydrates met with in the animal body.

2. Describe the structure of striated muscle.

3. Compare gastric with intestinal digestion.

4. Describe the sounds which accompany the action of the heart.

5. Describe the urine as to: (1) colour, (2) specific gravity, (3) reaction, (4) natural sediments. In (1), (2) and (3) explain variations which may occur.

6. Explain effects of section of 3rd and 7th nerves and of recurrent branch of 10th.

7. Explain the following anomalies of development; (1) *hare-lip*, (2) *congenital umbilical hernia*, (3) *Meckel's diverticulum ilei*, (4) *imperforate rectum*, (5) *cryptorchidismus*.

ANATOMY.

PRIMARY EXAMINATION.

TUESDAY, MARCH 20TH, 1883 :—3 to 5 P.M.

Examiner,..... .....PROFESSOR W. E. SCOTT, M.D.

1. What is the Pharynx composed of, where is it situated, and how many openings communicate with it?

2. What Artery gives off the ophthalmic, and what are its branches?

3. What are the relations and branches of the transverse portion of the Arch of the Aorta?

4. Give the origin, insertion, relations and action of the external abdominal oblique muscle?

5. What arteries form the Circle of Willis?

6. What are the branches and distribution of the Ophthalmic Nerve?

ANATOMY

SESSIONAL EXAMINATION.

FIRST YEAR.

TUESDAY, MARCH 20TH, 1883:—3 TO 5 P.M.

Examiner,..... .... PROFESSOR W. E. SCOTT, M.D.

1. What are the bones of the Face?
2. What are the muscles of the posterior Tibial Region?
3. Name some Enurthrosed articulations.
4. What are the openings in the Right-Auricle of the Heart?
5. Name the bones of the Tarsus.
6. What are the bones of the Pelvis?

HISTOLOGY.

FIRST YEAR.

MARCH 21ST:—10.30 TO 12 A.M.

Examiner,.....PROFESSOR OSLER.

1. Give a detailed account of Epithelium.
2. The structure of the Kidney.
3. The minute anatomy of the Spinal Cord.

PHYSICS.

SESSION 1882-83.

Examiner,..... .....G. P. GIRDWOOD, M.D., M.R.C.S. ENG.

1. Describe the terms cohesion, adhesion, chemical affinity.

2. What is the difference between a chemical compound and a mechanical mixture, giving examples?

3. Give the laws of chemical union and, illustrate their meaning.

4. Describe the law of Boyle or Marriott and, show its application in the measurement of gasses.

5. What is the difference between static and dynamic electricity, between a primary and secondary current, a simple and a compound circuit?

M. D., C. M., FINAL EXAMINATION.

SATURDAY, MARCH 24TH, 1883.

PRINCIPLES AND PRACTICE OF SURGERY.

Examiners..... ... { PROF. G. E. FENWICK, M.D.
" F. BULLER, M.D., M.R.C.S., ENG.

1. Ranula, describe its situation and general appearance, its cause, and mode of treatment.

2. Wound, in the soft parts apparently trifling, what complications will render it a serious, if not a fatal injury?

3. Osteomyelitis, what is it? Mention the most common terminations.

4. What is the meaning of the term "Ganglion" in a surgical sense. Describe its situation, cause and mode of treatment.

5. Ligature of the subclavian artery third part of its course.
Describe the operation, what would be your guide to the vessel, and how would you pass the ligature?

6. Excision of the elbow joint, what vessels and nerves are in proximity to the joint, and what tissues would you have to divide in performing the operation?

7. What are the symptoms and appearance of the limb in fracture of the lower end of the humerus? Give the diagnostic signs between it and dislocation of the elbow joint backwards.

8. What appearances and symptoms would lead you to suspect abscess of the antrum and how would you treat it.

9. Give the diagnosis and treatment of ordinary acute catarrhal inflammation of the middle ear.

10. Give the principal diagnostic points of distinction between inflammations of the conjunctiva cornea and iris.

THEORY AND PRACTICE OF MEDICINE.

THURSDAY, 22ND MARCH, 1883.

Examiner,..... ..... PROF. R. PALMER HOWARD, M.D.

1. What are the complications and sequelæ of Morbilli, Pertussis and Rickets respectively, and to what classes of disease do they belong?

2. What are the symptoms and lesions of structure in Malarial Cachexia? Sum up the characters of "Masked Agues."

3. Describe the method of employing salicylates in Rheumatic Fever, and state their influence on the disease and its complications. What inconveniences attend their use?

4. Sketch the morbid anatomy of Parenchymatous Nephritis.

5. State the arguments in favor of the parasitic origin of Tuberculosis and the difficulties in the way of the acceptance of that view.

6. What explanations may be given of the origin of cardiac murmurs heard in Anæmia?

7. Describe the symptoms and treatment of Typhlitis, specifying the doses of the medicines.

8. Angina Pectoris, its symptoms and pathology.

9. Describe the treatment of Hysteria and general nervousness.

10. The diagnosis of simple Leptomeningitis, Delirium Tremens and Acute Mania.

PRACTICAL ANATOMY.

EXAMINATION FOR PRIZE.

Examiner,.....FRANCIS J. SHEPHERD.

(1). Give the direction required to expose the Anterior Crural Nerve completely and describe the effects of its division (in the living) immediately below Pouparts' Ligament.

(2). Describe the anastomoses and the ankle joint, and give the relations and branches of the External Plantar Artery.

(3). The Skull-Cap having been removed, mention in order the various structures it is necessary to divide to remove the brain.

(4). In a transverse section of the trunk, on a level with the middle of the body of the first lumbar vertebra, name the parts divided in order from before backwards.

BOTANY.

SATURDAY, MARCH 17TH:—9 A. M.

Examiner,.....J. W. DAWSON, LL.D., F.R.S., &c.

1. State the more important causes of the preference of plants for particular soils and of the exhaustion of soils.

2. Explain how Carbon Dioxide and Ammonia contribute to the nutrition of the plant.

3. State the distinction between Definite and Indefinite Inflorescence, and name and describe some of the forms of each.

4. Explain the structure and functions of the Stamens and Pistils and the appearance of Pollen, under the microscope.

5. What is meant by Cohesion or Coalescence, Adnation and Irregularity, of the parts of the flower? Give examples.

6. Describe the parts concerned in fertilization, and how this takes place in Phænogams and in Mosses.

7. Describe the structures indicated by the terms Embryo and Albumen Sporangium, Legume, Samara. Give examples.

9. How could you distinguish a Cryptogam from a Phænogam, and in the latter an Exogen from an Endogen.

10. Trace any Canadian plant through the grades of the classification from the Series to the Species.

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11. State the place in the natural system of the genera *Lycopodium*, *Pinus*, *Ranunculus*, *Equisetum*, *Lilium*.

12. Describe any one of the specimens exhibited with, reference to parts, terms designating them, place in systematic botany, and microscopic structure.

MATRICULATION EXAMINATION.

SATURDAY, MARCH 31ST, 1883.

Examiner,.....H. ASPINWALL HOWE, M.A., LL.D.

ARITHMETIC.

1. Find by Practice the rental of 5 acres 2 roods 27 poles at £1 12s. 8d. per acre.

2. Divide ·14 by ·0128, and from the quotient subtract $\frac{2}{3}$ of $\frac{4}{5}$ of 12.

3. Reduce 3 furlongs 5 yards 2 feet 1 inch to the decimal of a mile.

4. Find how much per cent. 52 is of 70.

5. A and B can do a work in 3 days, B and C in 6 days, and A and C in 4 days. If they all work together and $9 be paid for the work, what pay should each get?

ALGEBRA.

1. If $a = -x$, $x = -\frac{1}{2}$, and $b=0$, find the numerial value of $x^4 - (a-b)\,x^3 + (a-b)\,b^2x - b^4$.

2. Divide $a^3+3\,abc-(b^3-c^3)$ by $a-(b-c)$, retaining the bracketed co-efficients of x, if you can.

3. Resolve into elementary factors $25\,x^5 - a^2x^3$ and $8x^3-27$.

4. Reduce to simplest form

$$\frac{a-b}{b} + \frac{2a}{a-b} - \frac{a^3+a^2b}{a^2b-b^3}$$

5. Solve the equations:—

(*a*) $5x-[8x-3\,\{16-6x-(4-5x)\}]=6$

(*b*) $\left\{\begin{array}{l} \frac{x}{a}+\frac{y}{b}=2 \\ bx-ay=0 \end{array}\right\}$

6. A sum of 24 shillings was received from 24 persons; some gave 9 pence each, and the rest $13\frac{1}{2}$ pence each; how many contributors were there of each class?

GEOMETRY.

1. Define *straight line*, *plane rectilineal angle*, *acute-angled triangle*, *square*, *parallelogram*, *rectangle*.

2. If two angles of a triangle be equal to one another, the sides also which subtend, or are opposite to, the equal angles, shall be equal to one another.

3. The opposite sides and angles of a parallelogram are equal to one another, and the diameter bisects the parallelogram, that is, divides it into two equal parts.

4. Through the angular points of any given triangle draw straight lines parallel to the opposite sides, and compare the area of the given triangle with that of the triangle formed by these lines.

5. If a straight line be divided into any two parts, the squares on the whole line and on one of the parts are equal to twice the rectangle under the whole and that part, together with the square on the other part.

NATURAL PHILOSOPHY.

1. Define *elasticity*, *resultant*, *lever*, *force*, *centre of gravity*.

2. Determine the inclination of a smooth inclined plane, when a force of 5 lbs. acting horizontally will sustain a weight of 10 lbs. upon the plane. Find also the pressure on the plane.

3. Explain the principle of *Virtual Velocities*, and from it deduce the relation between the power and weight in the cases of the lever and the windlass.

4. Explain the principle of the siphon and of the common pump.

5. What are the conditions of equilibrium of a solid body floating in a fluid ?

6. Shew how the specific gravity of a fluid may be found by aid of the Hydrostatic Balance. Illustrate by an example.

MATRICULATION EXAMINATION.

SATURDAY, MARCH 31ST, 1883.

LATIN.

Examiner,..... .....H. ASPINWALL HOWE, M.A., LL.D.

NOTE.—Candidates may choose, in this Paper, between Cicero and Virgil.

1. Translate, *without unnecessary change of construction* :—

(*a*) Servi mehercle mei si me isto pacto metuerent, ut te metuunt omnes cives tui, domum meam relinquendam putarem : tu tibi Urbem non arbitraris ? et, si me meis civibus injuria suspectum tam graviter atque offensum viderem, carere me aspectu civium, quam infestis oculis omnium conspici mallem : tu, quum conscientia scelerum tuorum agnoscas odium omnium justum et jam tibi diu debitum, dubitas, quorum mentes sensusque vulneras, eorum aspectum præsentiamque vitare ? Si te parentes timerent atque odissent tui, neque eos ulla ratione placare posses, ut opinor, ab eorum oculis aliquo concederes : nunc te patria, quæ communis est omnium nostrum parens, odit ac metuit, et jamdiu te nihil judicat nisi de parricidio suo cogitare.

(*b*) Numquam ego a diis immortalibus optabo, Quirites, invidiæ meæ levandæ caussa, ut L. Catilinam ducere exercitum hostium atque in armis volitare audiatis, sed triduo tamen audietis : multoque magis illud timeo, ne mihi sit invidiosum aliquando, quod illum emiserim, potius quam quod ejecerim. Sed quum sint homines, qui illum, quum profectus sit, ejectum esse dicant, iidem, si interfectus esset, quid dicerent ? Quamquam isti, qui

Catilinam Massiliam ire dictitant, non tam hoc queruntur quam verentur. Nemo est istorum tam misericors, qui illum non ad Manlium, quam ad Massilienses ire malit: ille autem, si mehercule hoc, quod agit, numquam ante cogitasset, tamen latrocinantem se interfici mallet, quam exsulem vivere. Nunc vero, quum ei nihil adhuc præter ipsius voluntatem cogitationemque acciderit, nisi quod vivis nobis Roma profectus est, optemus potius, ut eat in exsilium, quam queramur.

2. Parse and decline *isto pacto, metuerent, omnes cives, domum, tibi, arbitraris.*

3. Supply the other degrees of comparison to *graviter, diu, multus, magis, potius;* and write the principal parts of the verbs from which come *relinquendam, suspectum, agnoscas, concederes, acciderit, profectus est.*

4. Write short notes on the following constructions:—

(*a*) domum *relinquendam.*—What other idea besides futurity is expressed by the Latin Gerundive?

(*b*) carere *aspectu* civium.—What class of Verbs and Adjectives govern the Ablative?

(*c*) invidiæ meæ causa *levandæ.*—Explain the difference between the construction with the Gerund and with the Gerundive.

(*d*) *Catilinam Massiliam* ire.—The difference of these Accusatives?

(*e*) qui.....*malit.*—Why in the Subjunctive?

5. Distinguish between *iste, hic* and *ille; placo* and *placeo; aliquo, alicubi* and *alicunde; dicere* and *dictitare.* Give the derivation of *mehercle, injuria, parricidium, volitare, accidere.*

1. Translate, *without unnecessary change of construction:*—

(*a*) Navem in conspectu nullam, tres litore cervos
Prospicit errantes; hos tota armenta sequuntur
A tergo, et longum per valles pascitur agmen.
Constitit hic, arcumque manu celeresque sagittas
Corripuit, fidus quæ tela gerebat Achates;
Ductoresque ipsos primum, capita alta ferentes
Cornibus arboreis, sternit, tum vulgus; et omnem
Miscet agens telis nemora inter frondea turbam.
Nec prius absistit, quam septem ingentia victor
Corpora fundat humi, et numerum cum navibus æquet.
Hinc portum petit, et socios partitur in omnes.
Vina bonus quæ deinde cadis onerarat Acestes
Litore Trinacrio, dederatque abeuntibus heros,
Dividit, et dictis mærentia pectora mulcet.

(*b*) His animum arrecti dictis, et fortis Achates
Et pater Æneas jamdudum erumpere nubem

Ardebant. Prior Æneam compellat Achates:
"Nate dea, quæ nunc animo sententia surgit?
Omnia tuta vides, classem sociosque receptos.
Unus abest, medio in fluctu quem vidimus ipsi
Submersum; dictis respondent cetera matris.
Vix ea fatus erat, quum circumfusa repente
Scindit se nubes et in æthera purgat apertum.
Restitit Æneas claraque in luce refulsit,
Os humerosque deo similis: namque ipsa decoram
Cæsariem nato genetrix, lumenque juventæ
Purpureum, et lætos oculis afflarat honores:
Quale manus addunt ebori decus, aut ubi flavo
Argentum Pariusve lapis circumdatur auro.
Tum sic reginam alloquitur, cunctisque repente
Improvisus ait.

2. Parse and decline *constitit*, *manu*, *celeres sagittas*, *gerebat*, *ductores ipsos*, *vulgus*.

3. Supply the other degrees of comparison to *celer*, *prior*, *bonus*, *similis*, and write the principal parts of the verbs *gero*, *sterno*, *misceo*, *surgo*, *scindo*, *fundo*, *erumpo*.

4. Write short notes on the following constructions:

(*a*) *quæ* tela.—Is *quæ* a relative pronoun here, or a demonstrative adjective? Your reason?

(*b*) *Corripuit.....gerebat.*—What tenses and why different?

(*c*) fundat *humi*.—Give fully the Rule for this Genitive.

(*d*) erumpere *nubem*.—What is unusual in this Accusative?

(*e*) *os humerosque deo* similis.—Explain the Accusatives and also the Dative.

5. Distinguish between *hic*, *huc* and *hiuc*; *telum* and *sagitta*; *compellare* and *compellere*; *æther* and *aer*. Give the derivation of *jamdudum*, *genetrix juventa*, *repente*, and *improvisus*.

MATRICULATION EXAMINATION.

FRIDAY, MARCH 30TH, 1883.

ENGLISH.

Examiner,.....H. ASPINWALL HOWE, M.A., LL.D.

1. Analyse the following lines:—

Heaven's ebon vault,
Studded with stars unutterably bright,
Through which the Moon's unclouded glory rolls,
Seems like a canopy which love has spread
To curtain the sleeping world.

2. Parse the words italicised below, explaining fully the grammatical construction :

(*a*) Mutton is twelve cents *a pound*, and beef *fifteen cents*.
(*b*) He has fought a good *fight*.
(*c*) He slept the whole *morning*.
(*d*) I do not like *having been deceived*.
(*e*) Three questions were asked *me* by the examiners.
(*f*) We did not know *but that* he might come.

3. A verb in English has three Tenses, and each Tense has three forms to express the state of the action. Name these nine forms, and exhibit them by an example in tabular shape.

4. What is the rule for the use of *shall* and *will*? Give a reason for the rule, if you can.

5. What is the force of the following prefixes : *ante-*, *anti-*, *auto-*, *predis-*, *peri-*, *para-*, *se-*, *trans-*, *hyper-* ; and of the suffixes *-ate*, *-hood*, *-ock*, *-let*, *-one*, *-ose*, *-fy*, *-icle*, *-ize*, *-oid*? Give words as examples of each, with meaning.

6. Distinguish between *principle* and *principal* ; *palate*, *pallet* and *palette* ; *typography* and *topography* ; *inculpate* and *exculpate* ; *impassable* and *impassible* ; *invalid* and *invalid*.

7. Write fairly and legibly the Dictation which will be read to you ; punctuate properly.

8. Write a short Composition on "Phonetic Spelling," giving the arguments for and against. Illustrate what you write by examples.

ENGLISH HISTORY.

1. Name the first king of each family that has sat on the throne of England since the Norman Conquest.
Explain the claim of each of these, and give date of accession.

2. Draw a genealogical table of the House of Tudor.

3. Name the kings of England who have died violent deaths.

4. What heirs to the throne being eldest sons have died during the life of the reigning sovereign ?

5. When and how were Ireland, Wales and Scotland united to England? Write a brief account of *one* of these events.

6. What were the points at issue between Charles I. and the Parliament? How far was the king willing to yield ?

7. When, between whom, and with what results were fought the battles of Hastings, Bannockburn, Crecy, Agincourt, Worcester, Boyne? What were the Treaty of Utrecht, the Peace of Amiens, the Peace of Paris?

8. State briefly who were Stephen Langton, the Spensers, Jack Cade, Fairfax, Thomas Cromwell, Rizzio, Laud, Cardinal Pole.

GENERAL GEOGRAPHY.

1. Explain the terms:—*Latitude*, *Zone*, *Trade-wind*, *Simoon*, *Isothermal line*, *Magnetic Pole*.

2. Name, and state in what parts of the world are found:—

(*a*) The greatest bodies of fresh water.
(*b*) The largest salt-water lakes.
(*c*) The longest rivers.
(*d*) The highest mountain ranges.
(*e*) The widest deserts.

3. What countries produce, in greatest abundance, coal, iron, copper, salt; wheat, cotton, silk, wool; timber, cattle, hides?

4. What are the chief foreign possessions of England, and where situated?

5. Draw the coast line East of Asia from Behring Straits to Malacca, and put in the names of chief islands, countries, cities, and mouths of rivers.

6. What and where are Algiers, the sea of Aral, Bolivia, Borneo, Corsica, the Crimea, Cuba, the Great Belt, Thunder Bay, the Persian Gulf, the White Sea, Cadiz, the Malabar Coast?

Faculty of Law.

ROMAN LAW.

FIRST YEAR.

MARCH 9TH, 1883:—4 TO 6 P.M.

Examiner,.....N. W. TRENHOLME, M.A., B.C.L.

1. Define law; and point out the different conceptions and forms of law that prevailed at different epochs, according to Maine.

2. What is the true source of law? And describe and classify under their proper heads of direct and indirect law-making what are called the sources of Roman Law.

3. To what part of law does the first book of the *Institutes* correspond? And describe the legal institutions contained therein, and indicate which of these exist in our law.

4. State briefly what you understand by the history of Roman Law; how would you divide it, and what are some of the benefits to be derived from its study.

5. Give some account of the *Corpus Juris Civilis* and of the works composing it.

6. Explain fully: *Leges Agrariæ*, *Latini*, *comitia curiata*, *comitia centuriata*, *comitia tributa*, *leges sacræ*, *lex Canuleia*, *lex Hortensia*, Licinian rogations.

FIRST YEAR.

CRIMINAL LAW.

MONDAY, 12TH MARCH, 1883.

Examiner,.....PROFESSOR ARCHIBALD.

1. Define Larceny. A watchmaker to whom a watch was given by the owner for the purpose of having it regulated, disposed of the watch and applied the proceeds to his own purposes: Was he guilty of larceny, and give reasons for your opinion?

2. A lady wishing to get a railway ticket, the price of which was ten shillings, finding a crowd at the pay place at the station, asked the prisoner, who was nearer in to the wicket, to get a ticket for her, and handed him a sovereign to pay for it. He took the sovereign intending to steal it, and instead of getting the ticket ran away. Was he guilty of larceny, and give reasons?

3. Upon an indictment for receiving stolen goods found in the possession of the prisoner where there is no direct evidence of guilty knowledge on his part, what circumstances are material in proof of that fact?

4. What were the principal alterations introduced into the law of libel by Lord Campbell's Act: where two proprietors of a newspaper had completely distinct functions, one having charge of the literary, the other of the commercial, each having a general authority to manage his own department, and a libel was published in the literary department during the absence of the commercial editor, and without his knowledge. Would the latter be responsible? Would the question be in any way affected by the previous character of the newspaper?

5. Define conspiracy. Is it necessary that the object of the conspiracy should be accomplished? What circumstances are material to prove conspiracy?

6. State the rules of law relating to the limitations of responsibility for criminal acts arising from want of sufficient age.

BIBLIOGRAPHIE LÉGALE.

PREMIERE ANNEE.

MARDI, 13 MARS, 1883.

Examinateur,..... ....PROF. LAREAU.

1. Quels sont les éléments du Droit Canadien?

2. Quelles sont les principales ordonnances des rois de France au XVI. siècle, et dites ce qu'elles contiennent de remarquable?

3. Qu'est-ce que la Coutume de Paris; et qu'est-ce que l'Ordonnance de 1667?

4. Comment était organisée l'administration de la justice sous la domination française?

5. Quelles sont les principales clauses de l'acte de Québec (1774)?

6. Quelles sont les principales dispositions de l'acte constitutionel de 1791.

FIRST YEAR.

CIVIL PROCEDURE.

WEDNESDAY, MARCH 14TH:—4 TO 6 P. M.

FIRST YEAR.

Examiner,.....M. HUTCHINSON, B.C.L.

1. A gives his note to B, a resident of Quebec, dated and made payable at Montreal. B endorses it at Quebec, and transfers it to C. Can C sue B alone on the note in the District of Montreal? Give reasons.

2. A enters into a contract in New York by which he agrees to pay B a sum of money Can B sue for the recovery of his debt in Montreal? Give reasons, and state under what circumstances a declinatory exception would lie?

3. A note is dated and made payable in the District of Bedford, where the maker resides, and is endorsed by A, B and C, also residents of the District of Bedford. D, the holder, institutes an action on the note in Montreal, where he serves C personally, the other defendants being served at their respective domiciles. Has any one of the defendants a ground for a declinatory exception? Give reasons.

4. How would you describe in a suit "The Montreal Cotton Co.," if it was a corporate body, and "The Montreal Lumber Co.," if it was the business name of a partnership composed of John Brown and Thomas Jones?

5. How is service of action made upon a general partnership composed of several persons? How upon the captain or master of a ship who has no domicile in this Province? How upon a church fabrique?

6. In how many ways may a defendant resident in Toronto be summoned before our Courts? Describe each.

7. Give an instance in which a suit may be stayed by a dilatory exception, and state within what delay it must be fyled, and under what circumstances might other preliminary exceptions be fyled later.

8. What is the difference between a case of personal warranty and real warranty as regards the rights of the warrantor to take up the defence of the defendant?

9. A default case is pending before our Superior Court founded upon a detailed account for goods sold and delivered. The only witness who can prove the account is in New York. Before whom must his affidavit be sworn in order that judgment may be obtained on it here?

FIRST YEAR.

CIVIL LAW.

THURSDAY, 15TH MARCH, 1883.

Examiner, ... J. E. ROBIDOUX.

1. When and under what conditions does a woman an alien be come a British subject?

2. What are the effects of civil death?

3. Who keeps the registers of civil status? Who has authority to deliver extracts from the same?

4. How many kinds of domicile are known to the civil law? What persons have no domicile distinct and independent from the domicile of other persons?

5. What are the effects of absence: (*a*) with regard to the property of the absentee, (*b*) with regard to his eventual rights, (*c*) with regard to his consort?

6. When and on what grounds may the nullity of marriage be demanded by the consorts *only?* When may the nullity of marriage be demanded by parties other than the consorts, and who are the parties who can demand such nullity?

FIRST YEAR.

COMMERCIAL LAW.

FRIDAY, 16TH MARCH, 1883.

Examiner, ...L. H. DAVIDSON, M.A., B.C.L.

Agency—Partnership.

1. Define "Agency," and state what are *essentials* in respect of the contract. Who may appoint an agent, or grant a mandate, and who may act as agent? Explain fully the exceptions to general rule in each instance. Explain the maxim "Vicarius non habet vicarium."

2. Explain the particulars distinguishing the following classes of commercial agents from each other: (1) Auctioneers from Brokers. (2) Ordinary Brokers from Stock Brokers. (3) Ships' Husbands from Masters of Ships.

Explain the principle, "No man can be allowed to have an interest against his duty" as applied to agency.

3. What are the chief obligations of the principal towards his agent? What is a factor? What special powers does he possess relatively to his principal and third parties?

4. What is the effect of the agent entering into a contract in his own name as to his principal and as to third parties? Explain fully.

5. Define "Partnership." State the different kinds of commercial partnership, defining each.

6. What is the position of partners towards each other, as to the partnership property? as to dealing with third parties? What declaration is necessary under our law upon the formation of a partnership? And what is the effect of failing to comply with the law in this behalf?

INTERNATIONAL LAW AND INSURANCE.

SECOND AND THIRD YEARS.

THURSDAY, 8TH MARCH, 1883:—4 TO 6 P. M.

Examiner,.....W. W. H. KERR, Q.C., D.C.L.

1. A neutral vessel is hired by a belligerent as a transport, and is then despatched as part of a fleet, carrying troops, to make a descent upon the coast of the enemy, and is captured by one of the latter's cruisers. Is the vessel good prize? Give reasons.

2. D, domiciled in Scotland, marries, in London, B, an Englishwoman domiciled in England. D abandons his wife, goes to the United States, and there obtains a divorce. B marries again in England, immediately on hearing of the divorce. Is B guilty of bigamy?

3. A ship is insured for a voyage from Quebec to Liverpool, but clears for London. The master, however, in lieu of holding the vessel's course for London, sails direct for Liverpool, and the vessel arrives there in a damaged condition caused by perils of the sea. Is the insurer liable? Give reasons.

4. During the war between the United and Confederate States a vessel sailed from Liverpool, bound for Matamoras, in Mexico, a neutral port, loaded with arms and munitions of war. When within 2 miles and a half of the Coast of France she was overhauled by an American cruiser, taken possession of, and carried into an American port, where vessel and cargo were libelled as prize of war. Were the same good prize, and who would be the proper parties, if any, to claim the delivery to them of said ship and cargo? Give reasons.

5. D, a German, emigrates to the United States, acquires a domicile in the State of New York, and becomes naturalized; he then abandons his domicile there, sails for England, with the intention of acquiring a domicile in

Scotland, but dies intestate on his arrival at Liverpool, leaving moveables in the State of New York. By what law is the succession to those moveables regulated? Give reasons.

6. A applied to an agent of an Insurance Company to effect a policy of insurance on his property to the extent of $2000. This application was refused by the agent. A then applied to another agent of the same Company, and the risk was accepted and policy issued without his revealing to such second agent the previous application and refusal. The premises were burned during the continuance of such policy. Is the Insurance Company liable? Give reasons.

SECOND AND THIRD YEARS.

ROMAN LAW.

MARCH 9TH, 1883:—4 TO 6 P. M.

Examiner,.....N. W. TRENHOLME, M.A., B.C.L.

1. Point out some of the successive steps in the development of the Roman law of contract.

2. How is *obligatio* defined in the Institutes, and what is the value, if any, of the division of obligations given therein? What other division is there?

3. Give some account of the growth of the law of *pignus* in Roman Law, and of the actions connected therewith?

4. Indicate the principal differences in the obligations of the vendor and remedies of the purchaser as regards warranty in Roman Law, in old French Law and under our Code.

5. What are the *actio redhibitoria*, *actio quanti minoris*, when may they be exercised, and to what branch of Roman Law are we indebted for our law on this subject?

6. What is the *condictio indebiti*, when did it lie in Roman Law, when does it lie in our law, and what are the obligations of the debtor thereunder by our Code?

7. What are the different kinds of *depositum*, and point out differences in the obligations of the parties in each?

8. Give an historic account of the different kinds of sureties in Roman Law, and of their obligations and rights.

9. Define, *manus*, *confarreatio*, *usucapio*, *dominium*, *Jus Latinum*, *Jus Italicum*, *Bonorum possesio*, *comitia curiata*, *centuriata* and *tributa*, *principum placita*.

The first six questions for ordinary, and all nine for medal.

CRIMINAL PROCEDURE AND CONSTITUTIONAL LAW.

SECOND AND THIRD YEARS.

MONDAY, 12TH MARCH, 1883.

Examiner,..... PROF. ARCHIBALD.

1. What are the principal parts of an indictment?

2. Charles Henry, on March 1st, stole ten yards of broadcloth from a firm doing business under the name of Francis Smith & Co., composed of Francis Smith and John Jones, at Montreal: Draw an indictment against him: Insert also a count for receiving stolen goods (that is the same goods) against him.

3. What do you understand by the terms jury list, panel of jurors? How is the jury list formed?

4. Give a resumé of the proceedings before justices necessary to arrive at the committal of a prisoner for trial.

5. Describe the process by which the attendance of a sufficent number of jurors at the sessions of the criminal court is secured.

6. Give your views and arguments as to the constitutionality of the Act, 45 Vic. cap. 22, imposing burdens on certain corporations.

7. The directors of a joint stock bank, knowing it to be in a state of insolvency, issued a balance sheet shewing a profit, and thereupon declared a dividend of six per cent. They also issued advertisements inviting the public to take shares upon the faith of their representations that the bank was in a flourishing condition. Were they guilty of any, and if so what criminal offence?

8. Two persons were joint proprietors and editors of a newspaper, one, however, having complete control of the literary and the other of the commercial departments, neither interfering with the other, or knowing what the other did. A libel was published in the literary department during the absence of the commercial editor, and without his knowledge. The literary department of the paper had frequently previously contained libellous matter. Ought the commercial editor to be convicted of the libel?

9. Have our local Legislatures jurisdiction to pass laws restraining the sale of intoxicating liquors on Sundays, or after 11 p.m. on other days? Give reasons for your opinion.

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*Competitors for the Medal answer the whole paper, others will answer only the first six questions.

SECONDE ET TROISIÈME ANNÉES.

LOI CIVILE.

MARDI, 13 MARS, 1883.

Examinateur, ... PROF. LAREAU.

1. Quelles sont les qualités requises par la loi pour que la possession soit utile à la prescription?

2. Qu'entendez-vous par possession précaire, et qu'appelez-vous interversion de titre?

3. Quelles sont les choses que la loi déclare imprescriptibles?

4. Quelles sont les causes qui interrompent la prescription?

5. Quelles sont les causes qui suspendent le cours de la prescription?

6. Dans quels cas peut-on invoquer utilement la prescription de 30 ans, et dans quels cas peut-on invoquer celle de 10 ans?

7. Quelles sont les personnes sujettes à l'emprisonnement en matières civiles?

8. Quelle est la différence entre le privilége et l'hypothèque?

9. Comment et dans quel ordre s'établit le privilége sur les meubles, et sur les immeubles?

SECOND AND THIRD YEARS.

CIVIL PROCEDURE.

WEDNESDAY, MARCH 14TH:—4 TO 6.

SECOND AND THIRD YEARS.

Examiner, ... M. HUTCHINSON, B.C.L.

1. A is sued on a promissory note which he alleges in his plea is forged, upon whom at the institution of the action rests the burden of proof, and how may it be thrown from one party on to the other?

2. What is a demurrer? Give an example.

3. What is the object of an Intervention in a suit? At what stage of the suit can it be fyled, and what is the effect of it when allowed?

4. Can a husband joined in a suit merely to authorize his wife be summoned to answer interrogatories *sur faits et articles?* Can he be examined as a witness; if so, for whom and under what circumstances?

5. How can a corporate body which is a party to a suit answer interrogatories *sur faits et articles?* Can supplementary questions be put? Give reasons.

6. In what cases may evidence be taken before the trial of the cause? State how such evidence is taken both as regards witnesses in this province and in a foreign country.

7. A suit is pending in Montreal. In how many ways may the evidence of witnesses resident at Quebec be obtained? Describe each mode.

8. A landlord claims from his tenant $500 damages done to a house rented by the latter. The tenant applies for a jury trial. Is he entitled to it? Give reasons.

9. How, and before what Court must judgment be obtained on a verdict of a jury for the plaintiff? How opposed?

SECONDE ET TROISIEME ANNEE.

LOI CIVILE.

15 MARS, 1883.

Examinateur, ...PROF. J. E. ROBIDOUX.

1. Qu'entend-on par fruits naturels et par fruits civils? Comment s'acquièrent les fruits naturels? Comment s'acquièrent les fruits civils?

2. Quand l'usufruitier peut-il se libérer en rendant *l'estimation* mentionnée dans l'article suivant, "Si l'usufruit comprend des choses dont on "peut faire usage sans les consommer, comme l'argent, les grains, les "liqueurs, l'usufruitier a le droit de s'en servir, mais à la charge d'enrendre "une pareille quantité, qualité, ou *leur estimation*, à la fin de l'usufruit."

3. Quelles sont les dispositions du Code Civil relativement à l'usufruit des animaux?

4. En quoi une stipulation faite en vertu des dispositions de l'article 1029 du Code Civil? "On peut pareillement stipuler au profit d'un tiers, lors-"que telle est la condition d'un contrat que l'on fait pour soi-même, ou "d'une donation que l'on fait à un autre" ressemble-t-elle à une substitution? En quoi en diffère-t-elle?

5. Par quel acte peut-on créer une substitution? Qui peut se prévaloir du défaut d'enregistrement d'une substitution?

6. Quelle différence y a-t-il entre les droits de l'usufruitier, à l'extinction de l'usufruit et les droits du grevé de substitution, à l'ouverture de la substitution?

7. Un usufruitier protestant est-il tenu de payer les cotisations imposées sur un immeuble sujet à son usufruit, pour l'érection d'une église catholique, le nu propriétaire étant catholique ?

8. Quand l'aliénation finale des biens substitués peut-elle avoir lieu validement pendant la substitution ?

9. Quelle doit être la nature du titre contenant une prohibition d'aliénés.

N.B.—Les élèves qui ne concourent pas pour la médaille ne répondront qu'aux six premières questions.

Ceux qui concourent pour la médaille répondront à toutes les questions.

COMMERCIAL LAW.

SECOND YEAR;—THIRD YEAR FOR DEGREE OF B.C.L.

FRIDAY, 16TH MARCH.

Examiner,.....PROF. DAVIDSON.

Partnership—Joint Stock Companies.

1. Define "Partnership," and specify what is essential to its existence. State the rules as to determining whether a partnership exists or not relatively to third parties and apart from special agreement evidencing it. Explain fully.

2. Name the different kinds of Commercial Partnerships, and define each, explaining the position of the partners in regard to third parties. Explain fully.

3. Explain the points of difference between Joint Stock Companies and (1) Ordinary Partnerships and (2) Corporations proper. How are Joint Stock Companies formed? Explain the steps necessary.

4. Explain these maxims applicable to Partnerships: "*Tenet totum in communi et nihil separatim per se*," and Each partner is "*præpositus negotiis societatis.*"

5. In what way may partnerships be dissolved? What is the effect of dissolution as to the partners themselves? As to their liability towards third parties for the debts due at the time of the dissolution? As to debts incurred after dissolution in the name of the firm?

6. What is the rule as to the application of private property of the members of the firm to the partnership liabilities?

7. May partnerships unlimited as to duration be dissolved at the will of any one of the partners, and if so how? Explain at length.

8. How far can one partner bind the firm by guarantee given in its name for the debt of a third party? Give the test of the validity of such a guarantee.

9. What are the powers of Directors of a Joint Stock Company under the Dominion Act? How are they regarded in their dealing with third parties? To what extent do they bind the Company?

(The first six questions are for ordinary students; those competing for the Medal must answer all the questions.)

THEORY AND PRACTICE OF NOTARIAL DEEDS AND PROCEEDINGS.

TUESDAY, 13TH MARCH, 1883:—4 TO 6 P. M.

Examiner,.....LEWIS A. HART, M.A., B.C.L.

1. Mention and explain the principal divisions of notarial deeds, (1) as to their form, and (2) as to their substance or matter.

2. In what form should the accessory acts necessary to complete the principal deed be made, in those cases where the law requires the deed to be passed before a notary? Mention some instances, and give reasons for your opinion.

3. What are the cases in which a notarial deed must be passed *en brevet*; and state the reasons why, in such cases, the deed cannot be made *en minute?*

4. Can a notary stipulate or accept for an absent party; and, if not, why not?

5. Draft the mentions to be made in the principal deed and on the document annexed, (1) when the latter is executed under private seal, and (2) when it is made *en brevet.*

6. A notary, assisted by witnesses, is receiving the will of a sick person whose death may at any moment occur. The testator declares that he can sign; but when he takes the pen in hand to do so, he states that he cannot sign on account of momentary weakness, and that he will sign presently. What should the notary do in such a case? Draft the closing part of a will made under such circumstances.

7. When a party has falsely declared in a deed that he did not know how to sign, is the deed null? How is it in the case of a will? Give reasons for your opinion.

8. A notary is called upon to receive a will for a stranger, of whose language he is ignorant, and who does not understand English. Two witnesses are at hand to assist in receiving the will, but one of them only knows the English language, while the other witness understands both English and the language of the testator, and acts as interpreter. The notary, assisted by these two witnesses, executes the will in the English language. Is the will valid? What is the jurisprudence of our courts upon the subject?

9. What are the cases in which it is advisable to state whether a deed has been passed in the fore or in the afternoon? What advantage may sometimes result from such mention?

Students not competing for the Medal will answer the first six questions only; those competing will answer the whole paper.

University School Examinations.

ENGLISH GRAMMAR. (Preliminary.)

Monday, June 4th :—Morning, 9 to 11.

Examiners ..... { Chas. E. Moyse, B A. / Rev. A. Williamson. / Rev. Prof. Scarth, M.A. / Rev. C. P. Read, M.A.

1. Into what classes may nouns and adjectives be divided? Give instances.

2. In what cases are capital letters to be used instead of small ?

3. Give a plain rule for the gender of nouns.

4. What do you mean by :—root, derivative, inflexion, prefix, tense, transitive ?

5. What is the meaning of a 'direct object' and an 'indirect object' in a sentence ?

6. What are 'simple,' 'compound,' and 'complex' sentences ? Give examples.

7. Give the past tense and complete participle of :—split, read, shine, think, slide, spring, stride.

8. From what sources are English words derived ? Give any marks by which their different origins may be distinguished.

9. What is the difference between a personal and a relative pronoun ?

10. Write the plural of pea, penny, this, money, die, memorandum.

11. Analyse :—

"We now take up the second series of sub-orders of insects, in which the different segments of the body shew a strong tendency to remain equal in size, as in the larva state : in other words, there is less concentration towards the head."

ARITHMETIC.

MONDAY, JUNE 4TH:—AFTERNOON, 2 TO 5.

Examiners,..... { REV. PRINCIPAL LOBLEY, D.C.L.
G. H. CHANDLER, M.A.

1. What is the meaning of Numeration? Notation? Addition? Subtraction? Multiplication? Division?

Divide three hundred and sixty millions, nine hundred and nineteen thousand, eight hundred and fifty-six, by eighty-three.

2. What letters are used in Roman Notation, and how are they combined to express numbers? Change 9909 into Roman Notation.

3. What is the difference between a vulgar and a decimal fraction?

Convert $\frac{17}{1375}$ into a decimal.

4. Multiply $2.60\dot{4}$ by $1.\dot{2}3\dot{4}$, and divide the result by $.00\dot{4}$.

5. Find the value of 21 acres, 3 roods, 12 poles at $45 per acre.

6. Find the least common multiple of 3, 5, 9, 12, 17 and 20; and the greatest common measure 441 and 693.

7. Calculate the simple interest on $580 from 16th May, 1882, to 8th October, 1883 (both days inclusive) at 5 per cent. per annum.

8. If the wages of 12 men for 8 days of 8 hours each be $135, what will be the wages of 25 men for 12 days of 10 hours each?

9. Find the cost of planting a rectangular field measuring 34 poles 2 yards by 26 poles 3 yards at $6.50 per square pole, leaving a path 4 feet wide all round the field.

10. If 25 lbs. of tea at 60 cents per lb., be mixed with 30 lbs. at 47 cents; find the price of the mixture per lb., in order that there may be a profit of 18 per cent.

11. If a house had been sold for $7992 there would have been a gain of 8 per cent. on outlay; how much per cent. is lost or gained by selling it for $7511?

12. Find the distance between the opposite corners of a rectangular floor which measures 8 ft. 3 in. by 12 ft. $6\frac{1}{4}$ in.

GEOGRAPHY. (PRELIMINARY.)

TUESDAY, JUNE 8TH :—2 TO 4 P.M.

Examiners,..... { CHAS. E. MOYSE, B.A.
REV. J. WILLIAMSON.
REV. PROF. SCARTH, M.A.
REV. C. P. READ, M.A.

1. Define Latitude and Longitude. Name the Zones, and state their position.

2. Define Watershed, Archipelago, Peninsula, Delta, Plateau, Oasis.

3. Name the Oceans, and the countries separated by them.

4. Name the Peninsulas of North America.

5. Name the Provinces of the Dominion of Canada, and give their Capitals.

6. Give the Middle States of the United States, and their chief towns.

7. Into how many counties is England divided? Name any five of them.

8. Name any five rivers of Europe, and trace the course of any one of them.

9. Describe the climate of Asia. Name the great mountain chains.

10. Give the boundaries of Africa, and mention the principal straits.

THE GOSPELS.

FRIDAY, JUNE 1ST :—AFTERNOON, 4 TO 5.

Examiners,..... { CHAS. E. MOYSE, B.A.
REV. PROF. SCARTH, M.A.
REV. C. P. READ, M.A.
REV. J. WILLIAMSON.

1. Tell what you know of John the Baptist.

2. Give an account of the various incidents connected with the birth of Jesus, as recorded in the Gospels.

3. An outline of the Sermon on the Mount.

4. Define a *Parable;* and give the parable of the *Talents*, with your interpretation of it.

5. Give an account of the circumstances attending the arrest, trial, and execution of Jesus.

BRITISH AND CANADIAN HISTORY.

TUESDAY, JUNE 5TH :—MORNING, 9 TO 12.

Examiners, ... CHAS. E. MOYSE, B.A.
REV. PROF. SCARTH, M.A.
REV. C. P READ, M.A.
REV. J. WILLIAMSON.

1. Tell the duration, extent and effects of the occupation of Britain by the Romans, and the occasion of their departure.

2. Give a short account of the social condition of the Anglo-Saxons, and distinguish between *king, earl, thane, ceorl, villain*

3. Tell what you know of the Feudal System.

4. Sketch the reign of Edward I. How far did Edward I. succeed in ralizing his aim of uniting the whole of Great Britain under one government.

5. Mention three leading events in the reign of Queen Elizabeth.

6. (*a*) The origin of the terms "Cavaliers" and "Roundheads"?

(*b*) The political principles of the parties to whom they were applied?

(*c*) The terms of the Petition of Right of 1628?

7. Give the substance of the Declaration of Rights of 1688.

8. Give a short account, with dates, of the battles of Hastings, Crecy, Bosworth, Bannockburn, and Waterloo.

9. Mention some leading events associated with names of *Alfred the Great, Thomas a Becket, King John, Wat Tyler, Thomas Cromwell.*

10. Give a short account of Jacques Cartier's second voyage in the St. Lawrence.

11. Briefly narrate the events connected with the siege and capture of Quebec by the English.

12. State the leading terms of the British North America Act in 1867.

OPTIONAL SUBJECTS.

LATIN.

THURSDAY, JUNE 7TH :—MORNING, 9 TO 12.

Examiners, ... { REV. GEORGE CORNISH, LL.D.
REV. CANON NORMAN, D.C.L.

(A)

1. Translate, Caesar, Book IV., chap. 25 :—

Quod ubi Caesar animadvertit, naves longas, quarum et species erat *barbaris* inusitatior et motus ad usum expeditior, paulum removeri ab onerariis navibus et remis incitari et ad latus apertum hostium constitui, atque inde *fundis, sagittis, tormentis* hostes propelli ac summoveri jussit; quae res *magno usui nostris* fuit. Nam et navium figura et remorum motu et inusitato genere tormentorum permoti barbari constiterunt ac paulum modo pedem rettulerunt. Atque *nostris militibus cunctantibus* maxime propter altitudinem maris, qui decimae legionis aquilam ferebat, contestatus *deos* ut ea res *legioni* feliciter eveniret, Desilite, inquit, commilitones, nisi vultis aquilam hostibus prodere: ego certe meum rei publicae atque imperatori officium praestitero. Hoc quum voce magna dixisset, se ex navi projecit atque in hostes aquilam ferre coepit. Tum nostri cohortati inter se, ne tantum dedecus *admitteretur*, universi ex navi desiluerunt. Hos item ex proximis primis navibus quum *conspexissent*, subsecuti *hostibus* appropinquarunt.

2. Explain carefully the grammatical construction of the words printed in Italics in the above extract.

3. Parse the following :—adisset, adesset, venturum, parandarum, contractis, nactus, progressi, consuerant, contestatus, coeperunt.

(B)

4. Translate, Virgil, Æneid V :—

Excipiunt plausu pavidos, gaudentque tuentes
Dardanidae, veterumque adgnoscunt ora parentum.
Postquam omnem laeti consessum oculosque suorum
Lustravere in equis, signum clamore paratis
Epytides longe dedit insonuitque flagello.
Olli discurrere pares, atque agmina terni
Diductis solvere choris, rursusque vocati
Convertere vias infestaque tela tulere.
Inde alios ineunt cursus aliosque recursus
Adversi spatiis, alternosque orbibus orbis
Inpediunt, pugnaeque cient simulacra sub armis;
Et nunc terga fuga nudant, nunc spicula vertunt
Infensi, facta pariter nunc pace feruntur.

5. Translate, Cicero, Pro Archia :—

Sulla quum Hispanos donaret et Gallos, credo hunc petentem repudiasset: quem nos in contione vidimus, quum ei libellum malus poëta de populo subiecisset: quod epigramma in eum fecisset, tantummodo alternis versibus longiusculis, statim ex iis rebus, quas tunc vendebat, iussit ei praemium tribui sub ea condicione, ne quid postea scriberet. Qui sedulitatem mali poëtae duxerit aliquo tamen praemio dignam, huius ingenium et virtutem in scribendo et copiam non expetisset? Quid? a Q. Metello Pio, familiarissimo suo, qui civitate multos donavit, neque per se neque per Lucullos impetravisset? qui praesertim usque eo de suis rebus scribi cuperet, ut etiam Cordubae natis poëtis, pingue quiddam sonantibus atque peregrinum, tamen aures suas dederet. Neque enim est hoc dissimulandum, quod obscurari non potest, sed prae nobis ferendum, trahimur omnes studio laudis et optimus quisque maxime gloria ducitur. Ipsi illi philosophi etiam in illis libellis, quos de contemnenda gloria scribunt, nomen suum inscribunt: in eo ipso, in quo praedicationem nobilitatemque despiciunt, praedicari de se ac nominari volunt.

6. Explain the constructions of the following: (1) Insonuitque flagello. (2) Terga fuga nudant.

7. Translate :—(1) Natus est loco nobili. (2) prætextatus (3) audiebatur a M Æmilio. (4) scriptor rerum. (5) togati judices. (6) litterarum memoriam flagitare. (7) recipere in civitatum.

8. (*a*) Derive and explain :—Ancipitem, parietibus, agmina, irremeabilis, peregrinus, exsilium, vinculum, convivus, ærarium, cruciatus. (*b*) Account for the forms :—olli, terni. (*c*) Give the force of *ille* in "ille Cato," and "ille Marius:" distinguish quisquam, quisque, quis, quisquis and quidam. (*d*) State what cases follow the verb *dono*, and the adjective *plenus*.

9. (*a*) Compare celer, beneficus, suprâ, pius, dubius, gracilis. (*b*) Give the principal parts of :—Agnosco, fallo, gaudeo, credo, cupio, peto, exprimo, attiugo, sentio.

10. (*a*) What are the rules for expressing motion to and from a place in Latin? (*b*) In how many ways can you express a purpose in Latin?—Give examples. (*c*) Put into Latin :—(1) At Athens. (2) At Rome. (3) at Tenedus. (4) At Sigeum. (5) (In more ways than one) In the presence of the King.

GREEK.

FRIDAY, JUNE 8TH :—MORNING, 9 TO 12.

Examiners, ... { REV. GEORGE CORNISH, LL.D.
REV. CANON NORMAN, D.C.L.

(A)

1. Translate, Xenophon, Anabasis, Book. II. :—

(*a*) Μετὰ δὲ τὸ δεῖπνον ἔτυχον ἐν περιπάτῳ ὄντες πρὸ τῶν ὅπλων Πρόξενος καὶ Ξενοφῶν· καὶ προσελθὼν ἄνθρωπός τις ἠρώτησε τοὺς προφύλακας ποῦ ἂν ἴδοι Πρόξενον ἢ Κλέαρχον· Μένωνα δὲ οὐκ ἐζήτει, καὶ ταῦτα παρ' Ἀριαίου ὢν τοῦ Μένωνος ξένου. Ἐπεὶ δὲ Πρόξενος εἶπεν ὅτι αὐτός εἰμι ὃν ζητεῖς, εἶπεν ὁ ἄνθρωπος τάδε· Ἐπεμψέ με Ἀριαῖος καὶ Ἀρτάοζος, πιστοὶ ὄντες Κύρῳ καὶ ὑμῖν εὖνοι, καὶ κελεύουσι φυλάττεσθαι μὴ ὑμῖν ἐπιθῶνται τῆς νυκτὸς οἱ βάρβαροι· ἔστι δὲ στράτευμα πολὺ ἐν τῷ πλησίον παραδείσῳ. Καὶ παρὰ τὴν γέφυραν τοῦ Τίγρητος ποταμοῦ πέμψαι κελεύουσι φυλακήν, ὡς διανοεῖται αὐτὴν λῦσαι Τισσαφέρνης τῆς νυκτός, ἐὰν δύνηται, ὡς μὴ διαβῆτε, ἀλλ' ἐν μέσῳ ἀποληφθῆτε τοῦ ποταμοῦ καὶ τῆς διώρυχος.

(*b*) Εἰ δὲ δὴ καὶ μανέντες σε κατακτείναιμεν, ἄλλο τι ἂν ἢ τὸν εὐεργέτην κατακτείναντες πρὸς βασιλέα τὸν μέγιστον ἔφεδρον ἀγωνιζοίμεθα ; ὅσων δὲ δὴ καὶ οἵων ἂν ἐλίπδων ἐμαυτὸν στερήσαιμι, εἴ σέ τι κακὸν ἐπιχειρήσαιμι ποιεῖν, ταῦτα λέξω. Ἐγὼ γὰρ Κῦρον ἐπεθύμησά μοι φίλον γενέσθαι, νομίζων τῶν τότε ἱκανώτατον εἶναι εὖ ποιεῖν ὃν βούλοιτο· σὲ δὲ νῦν ὁρῶ τήν τε Κύρου δύναμιν καὶ χώραν ἔχοντα καὶ τὴν σεαυτοῦ ἀρχὴν σώζοντα, τὴν δὲ βασιλέως δύναμιν, ἣ Κῦρος πολεμίᾳ ἐχρῆτο, σοὶ ταύτην ξύμμαχον οὖσαν.

2. Derive, προδότας, σπονδαί, κακόνους, στρατηγῶς.

3. Parse :—ὀμόσαι πρίασθαι, διαβάλλοντα, ἐλεγχθῶσι, ὄντας, εἰδώς, ἰέναι.

(B)

4. Translate, Homer, Iliad Bk. VI. :—

(*c*) Ζώγρει, Ἀτρέος υἱὲ, σὺ δ' ἄξια δέξαι ἄποινα.
πολλὰ δ' ἐν ἀφνειοῦ πατρὸς κειμήλια κεῖται,
χαλκός τε χρυσός τε πολύκμητός τε σίδηρος·
τῶν κέν τοι χαρίσαιτο πατὴρ ἀπερείσι' ἄποινα,
εἰ κεν ἐμὲ ζωὸν πεπύθοιτ' ἐπὶ νηυσὶν Ἀχαιῶν.
Ὣς φάτο, τῷ δ' ἄρα θυμὸν ἐνὶ στήθεσσιν ὄρινεν.
καὶ δή μιν τάχ' ἔμελλε θοὰς ἐπὶ νῆας Ἀχαιῶν
δώσειν ᾧ θεράποντι καταξέμεν· ἀλλ' Ἀγαμέμνων
ἀντίος ἦλθε θέων, καὶ ὁμοκλήσας ἔπος ηὔδα.

Ὦ πέπον, ὦ Μενέλαε, τίη δὲ σὺ κήδεαι οὕτως
ἀνδρῶν, ἢ σοὶ ἄριστα πεποίηται κατὰ οἶκον
πρὸς Τρώων· τῶν μήτις ὑπεκφύγοι αἰπὺν ὄλεθρον
χειρὰς θ' ἡμετέρας, μηδ' ὄντινα γαστέρι μήτηρ
κοῦρον ἐόντα φέροι, μηδ' ὃς φύγοι, ἀλλ' ἅμα πάντες
Ἰλίου ἐξαπολοίατ' ἀκήδεστοι καὶ ἄφαντοι.

(*d*) Ὣς ἄρα φωνήσας κόρυθ' εἵλετο φαίδιμος Ἕκτωρ
ἵππουριν· ἄλοχος δὲ φίλη οἰκόνδε βεβήκει
ἐντροπαλιζομένη, θαλερὸν κατὰ δάκρυ χέουσα.
αἶψα δ' ἔπειθ' ἵκανε δόμους εὐναιετάοντας
Ἕκτορος ἀνδροφόνοιο, κιχήσατο δ' ἔνδοθι πολλὰς
ἀμφιπόλους, τῇσιν δὲ γόον πάσῃσιν ἐνῶρσεν.
αἱ μὲν ἔτι ζωὸν γόον Ἕκτορα ᾧ ἐνὶ οἴκῳ·
οὐ γάρ μιν ἔτ' ἔφαντο ὑπότροπον ἐκ πολέμοιο
ἴξεσθαι, προφυγόντα μένος καὶ χεῖρας Ἀχαιῶν.

5. Name the metre of the above and write down the scheme ; scan the first three verses of ext. (*a*).

6. Parse the following words :—*δέξαι, πεπύθοιτο, καταξέμεν, ἠΰδα. εἵλετο, κιχήσατο, γόον, πέρσεν, ἐπίσπῃς, ἀμφιδέδηε, μίγη, ἐνήρατο.*

7. Write down the *Nom. Sing,* and *Plu.* of the following :—*φάλαγγα, κόρυθος, βιότοιο, γούνων, νηυσίν, φρένας, πείρατα, ξεστῆς, κρατός.*

8. Give the meaning and derivation of :—*κλυτά, πότνια, θαλερός, ἀργεννῆς, ἀμβατός, ἄμμορον, αἰθοπα,* Σκαιάς.

9. Distinguish between the meaning of :—*φῶς* and *φώς, θέων* and *θεῶν, οἷος* and *οἶος, ἄνα* and *ἀνά, κρατός* and *κράτος.*

10. (*a*) Decline :—*μαθητής, κόραξ, γυνή, γόνυ, πολύς, πᾶς.* (*b*) Write down the principal parts (*1st. Sing., Ind. Mood*) of :—*γράφω, βάλλω, τάσσω, αἱρέω, αἰσθανομαι, πυνθάνομαι.* (*c*) Write down the *Pres. Infin,* n English and Latin of *εἰμί, εἶμι,* and *ἴημι,* severally.

FRENCH.

WEDNESDAY, JUNE 6TH :—AFTERNOON, 2 TO 5.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. Translate into English :

Un jour, ils venaient de (*a*) franchir une petite rivière, et, pour retarder la poursuite des ennemis, on (*b*) avait essayé (*c*) de faire (*d*) sauter deux arches du pont de bois qu'on venait de traverser ; mais les tonneaux (*e*) de

poudre avaient été posés (*f*) si précipitamment que l'explosion ne produisit que peu d'effet: les arches furent cependant démantibulées, (*g*) mais toute la charpente appuyait encore sur une grosse (*h*) poutre qui la (*i*) retenait, et qui, si les ennemis fussent arrivés, eût bientôt permis (*j*) de reconstruire le pont.

Le Petit Sapeur de dix ans.

(*a*) How do you call that expression *venaient de?* What is the exact English equivalent?

(*b*) What part of speech is *on?* To what does it refer? Why is *avait* in the singular?

(*c*) What is tense of *avait essayé?*

(*d*) What is the exact meaning of *faire?* What is its meaning here?

(*e*) What is the singular of *tonneaux?* Give the rule to form the plural. Write in the plural and give the rule to form the plural of *sou, genou, trou, hibou, fou, gouvernail* and *corail.*

(*f*) Why are *posés* and *démantibulées* written so? Give the rule.

(*g*) What part of speech is *grosse*? What is the difference between *grosse* and *grande?*

(*h*) Parse *la.*

(*i*) What is the tense of *eût permis?* Why is that verb divided by that word *bientôt?* Give the rule.

2. Write in full the eight tenses of the Indicative Mood of the verb *venaient*; and the four tenses of the Subjunctive Mood of the verb *furent.*

3. Translate into French:

SOLEMN GAMES OF GREECE.

The foot race.

When the Presidents had taken their places a herald cried out: "Let the runners of the stade present themselves." There appeared immediately a great number of them, who placed themselves on a line, according to the rank which lot had assigned to them. The herald recited their names and those of their native country. If those names had been illustrated by preceding victories they were received (welcomed) with redoubled applause; when the herald had added: "Can any one reproach these Athletes with having been in fetters or with having led an irregular life? There was a deep silence.

Translated from les Jeux Solennels de la Grèce.

GERMAN.

FRIDAY, JUNE 8TH :—AFTERNOON, 2 TO 5.

Examiner,.....C. F. A. MARKGRAF, M.A.

1. Translate into English :—

(A) Der Araber in der Wüste.

Ein Araber hatte sich in der Wüste verirrt und war in Gefahr, vor Hunger und Durst zu sterben. Nach langem Umherirren fand er eine von den Cisternen oder Wassergruben, aus welchen die Pilger ihre Kameele tränken, und einen kleinen, ledernen Sack, der auf dem Sande lag. „Gott sei gelobt!" sprach er, als er ihn aufhob und befühlte ; „das sind gewiß Datteln oder Nüsse ; wie will ich mich an ihnen erquicken und laben ! " In dieser süßen Hoffnung öffnete er schnell den Sack, sah, was er enthielt, und rief dann ganz traurig aus : „Ach, es sind nur Perlen ! "

Schubart.

(B) Ich wohn' in einem steinernen Haus,
Da lieg' ich verborgen und schlafe ;
Doch ich trete hervor, ich eile heraus,
Gefordert mit eiserner Waffe.
Erst bin ich unscheinbar und schwach und klein,
Mich kann dein Athem bezwingen ;
Ein Regentropfen schon saugt mich ein,
Doch mir wachsen im Siege die Schwingen ;
Wenn die mächtige Schwester sich zu mir gesellt,
Erwachs' ich zum furchtbar'n Gebieter der Welt.

SCHILLER, Parabeln und Räthsel.

(C) Kennst du das Haus ? Auf Säulen ruht sein Dach,
Es glänzt der Saal, es schimmert das Gemach,
Und Marmorbilder stehn und sehn mich an ;
Was hat man dir, du armes Kind, gethan ?
Kennst du es wohl ?
Dahin ! Dahin !
Möcht' ich mit dir, o mein Beschützer, ziehn.
Kennst du den Berg und seinen Wolkensteg ?
Das Maulthier sucht im Nebel seinen Weg ;
In Höhlen wohnt der Drachen alte Brut :
Es stürzt der Fels und über ihn die Fluth.
Kennst du es wohl ?
Dahin ! Dahin !
Geht unser Weg ! o Vater, laß uns ziehn !

Goethe.

2. (See Ext. A, B and C). (*a*) Give the four cases Singular of:—langem Umherirren; einen kleinen, ledernen Sack; einem ſteinernen Haus; dieſer ſüßen Hoffnung;—(*b*) Decline in both numbers:—eiſerner Waffe; die mächtige Schweſter; mein Beſchützer. (*c*) State the rule for the formation of adjectives like ledern, ſteinern, eiſern, &c.

3. Das ſind....es ſind....es glänzt....es ſtürzt (See Ext. A and B.) Explain these constructions.

4. Hatte ſich verirrt, war, fand, lag, ſprach, aufhob, befühlte, ſah, enthielt rief aus, verborgen, trete hervor, gefordert, kann, ſaugt ein, ſich geſellt, hat gethan, möcht, laß. (See Ext. A, B, C). Parse these verbs, and give their Present Infinitives.

5. (*a*) Which declinable words take *always* the ending „e" in the Nominative Plural? (*b*) Which masculine, feminine and neuter nouns do *not modify* the radical vowel in the Plural? (*c*) Form diminutives from the following nouns:—Hut, Luft, Blatt, Roſe, Knabe, Tuch, Vogel, Korb, Mutter, Kirche, Garten.

6. (*a*) Give the Comparative and Superlative of roth, ſcharf, ſtolz, arm, zahm, klug, artig, kurz.—How do you write „hoch" in '*the high tree, he higher tree, the highest one*'? (*b*) Write in full letters 41, 301, 611, 8195.—How do you express *once, three times*, the *first time, a fourth time; the twelfth, the twenty-first, a sixth one*?

7. Transalte:— Is that a new book, or an old *one*? Read that letter! May he not speak? Am I not right? What o'clock is it? It is a quarter past two; it is half past five. These ladies are my daughter's friends. He lived for a month at his brother's house.

8. Conjugate erlauben, denken, abſchreiben,— giving the 3rd Sing. and the 2nd Plu. of all the tenses of the Indicative active.

9. (*a*) When is the English preposition '*of*' *not* expressed in German? When is it rendered by „von"? (*b*) By what prepositions is motion *to* and *from* a place expressed in German? Give short examples or *a* and *b*.

10. Translate into English:—

Die meiſten Paläſte und Schlöſſer unſerer Könige ſind ſchon vor Jahrhunderten gebaut. Deutſchland hat mehrere großen Flüſſe; aber der Rhein iſt der ſchönſte von allen. Man hat ihn gern, weil er gegen Jedermann höflich iſt. Ich höre am liebſten die lehrreichen Geſpräche weiſer Männer Die Bilder, welche ich dir gezeigt habe, haben meinen Eltern viel Geld gekoſtet. Der Lehrer lobte ſeine Schüler, denn ſie waren fleißig geweſen und

haben viel gearbeitet. Das verlorene Kind hat man nach einigen Stunden im Walde wiedergefunden. Wir sollen gutem Rathe immer ein williges Ohr leihen. Der Mond geht auf, wenn die Sonne untergeht. Ein Fremder, der so eben mit der Eisenbahn ankam, hat nach Ihnen gefragt; er wünscht Sie zu sehen, um Ihnen etwas Wichtiges zu sagen.

ALGEBRA.

TUESDAY, JUNE 12TH: 9 to 12.

Examiners, ... { REV. PRINCIPAL LOBLEY, D.C.L
G. H. CHANDLER, M.A.

1. Multiply $1+2x-x^2-\frac{1}{2}x^3$ by itself, and find the value of the result, if $1-2x=3$.

2. Find the remainder when $a^5-4a^3b^2-8a^2b^3-17ab^4-15b^5$ is divided by $a^2-2ab-3b^2$.

3. Simplify $\frac{2}{3}x\,(x+1)\,\{x+2-\frac{1}{2}(2x+1)\}$ and $\frac{2\,(x^2-\frac{1}{4})}{2x+1}+\frac{1}{2}$.

4. Reduce the following fractions to their lowest terms:

$$\frac{a^2x+a^3}{a\,x^2-a^3}\,,\quad \frac{(x^4-a^4)\,(x-a)}{(x^2+a^2-2ax)\,(ax+x^2)}\,,\quad \frac{1+x^3}{1+2x+2x^2+x^3}\,.$$

5. Find the square root of $x^4+2x^3-x+\frac{1}{4}$ and of $\frac{4x^2-4x+1}{9x^2+6x+1}$

6. Solve the equations;

$$2x-\frac{x}{2}=18,\quad (m+n)\,(m-x)=m\,(n-x),$$

$$\left.\begin{aligned} 2x-\frac{y-3}{5}&=4\\ 3y+\frac{x-2}{3}&=9 \end{aligned}\right\}$$

7. If ax^2+bx+c become 8, 22, 42 respectively, when x becomes 2, 3, 4, what will it become when $x=-\frac{1}{3}$?

8. Find two numbers which produce the same result, 7, whether one be subtracted from the other, or the latter divided by the former.

9. In a certain school there are 6 boys to every 5 girls; if there were 2 boys less and 2 girls more there would be the same number of each; find the number.

10. Any odd number may be represented by $2v+1$; prove that the pifference of the squares of any two odd numbers is exactly divisible by 8.

TRIGONOMETRY.

WEDNESDAY, JUNE 13TH:—9 TO 12.

Examiners,..... ..... { REV. PRINCIPAL LOBLEY, D.C.L. / G. H. CHANDLER, M.A.

1. Find the ratio of the unit angle in circular measurement to one second.

2. Define the sine, tangent, and secant of an angle, and find their values when the angle is half a right angle, and also when the angle is three halves of a right angle.

3. Show how to obtain the tangent of an angle when the sine is given. Why should the double sign $\pm$ appear in these results? If the angle were between 90° and 180° which sign would you choose?

4. One side of a right-angled triangle is 3 and the hypotenuse is 4; find the secants of the angles.

5. Prove the formula for finding the cosine of the sum of two angles A and B in terms of the sines and cosines of A and B.

6. Given $\cos A = \frac{1}{2}$, $\cos B = \frac{1}{3}$, find $\cos (A+B)$.

7. Prove the relations:—

$$\cot^2 A - \cos^2 A = \cot^2 A \cos^2 A = \cos^4 A \operatorname{cosec}^2 A,$$

$$(\sin A + \sec A)^2 + (\cos A + \operatorname{cosec} A)^2 = (1 + \sec A \operatorname{cosec} A)^2$$

$$1 + \cos A = 2 \cos^2 \frac{A}{2}.$$

8. By what measurements and calculations could you ascertain the breadthof a river without crossing it?

GEOMETRICAL AND FREEHAND DRAWING.

SATURDAY, JUNE 2ND, 1883.—9 TO 12 A.M.

Examiner,..... .....C. H. MCLEOD, MA. E.

1. Draw two lines which meet at an angle of $67\frac{1}{2}°$.

2. Between two straight lines which do not meet there is a point $\frac{1}{2}$ an inch in perpendicular distance from one of the lines and $\frac{3}{4}$ of an inch from the other line. Draw through the point a line which would, if produced, pass through the point towards which the given lines converge.

3. There is a point and a line, draw the circle which shall pass through the point and touch the line in a given point.

4. Draw an ellipse, the diameters of which are respectively 2 inches and 1 inch.

5. Construct a regular hexagon of 1 in. side, and find a triangle which has the same area as the hexagon.

5. Make a freehand drawing of the objects before you.

(*a*) A vase form.
(*b*) A square prism cut to turn an angle of 60.°

7. Draw, freehand, a straight line or floral design for a border.

NOTE.—No mechanical measurements will be allowed in problems 6 and 7. In the geometrical problems construction lines are to be dotted, and all results are to be obtained by direct construction, not by trial.

ENGLISH LANGUAGE. (OPTIONAL.)

(Smith's *Grammar*, Peile's *Primer of Philology*. Trench's *Study of Words*).

MONDAY, JUNE 11TH:—AFTERNOON, 2 TO 5.

Examiners, ... { CHAS. E. MOYSE, B.A. / REV. PROF. SCARTH, M.A. / REV. C. P. READ, M.A. / REV. J. WILLIAMSON.

1. What do you know concerning the origin of Language?

2. To what language has the term *Indo-European* been applied, and why? To which branch does *English* belong?

3. Give an outline of the development of the English Language, pointing out its three main stages and the chief characteristics of each.

4. "In modern English the difference between the two elements—Teutonic and Latin—is one of *function, not* of *quantity* or *number*." Explain and illustrate this statement.

5. Carefully define the terms *synthetic* and *analytic* as applied to languages. Show how a language may pass from the one class to the other.

6. State and explain *Grimm's Law*, giving three examples of its application.

7. "Language is fossil poetry, and fossil history as well." Explain and illustrate this statement.

8. Give examples of:

(*a*) The "deterioration and degeneration," and (*b*) the "purifying and ennobling," of words; and (*c*) the "modifications of meaning which a word has undergone in being transplanted from one soil to another."

9. "Language is the main, oftentimes the only, connecting link between the past and present." In what senses is this true? Give examples.

10. (*a*) Trace the gradual change of meaning in the words: *dunce, frank, slave, pagan, legend.*

(*b*) Define *Synonym*, show how Synonyms have arisen, and distinguish between: *Vengeance* and *revenge; arrogant, presumptuous*, and *insolent; genuine* and *authentic.*

ENGLISH LITERATURE.

Brooke's *Primer; The Lady of the Lake; Paradise Lost Books I. and II.*

SATURDAY, JUNE 9TH:—MORNING, 9 TO 12.

Examiners..... { CHAS. E. MOYSE, B.A.
REV. PROF. SCARTH, M.A.
REV. C. P. READ, M.A.
REV. J. WILLIAMSON.

1. Give a short account of Chaucer and *The Canterbury Tales.*

2. Explain the plan and purpose of Spenser's *Faerie Queene.*

3. (*a*) What were the *Miracle Plays* and the *Moralities*? (*b*) Shew how they gave rise to the English Drama.

4. (*a*) Mention *six* of the more important Plays of Shakespere.
(*b*) Give an account of one of them.

5. (*a*) In what way was English Literature influenced by the French Revolution?

(*b*) Illustrate your answer by a reference to the works of some writer of the period.

6. Give an account of a favorite book or poem you have lately read.

7. Shortly describe the leading characters in *The Lady of the Lake.*

8. Explain the following terms occurring in it:—*Quarry, Banshee, Coronach, Fays, Fiery Cross.*

9. Give the Argument of the First book of Paradise Lost.

10. Explain,

(*a*) Briareos or Typhon, whom the den
By ancient Tarsus held.

(*b*) When her barbarous sons
Come like a deluge on the South, and spread
Beneath Gibraltar to the Libyan sands.

(*c*) Or on the Delphian cliff
Or in Dodona, and through all the bounds
Of Doric land; or who with Saturn old
Fled over Adria to the Hesperian fields,
And o'er the Celtic roam'd the utmost isles.

(*d*) That Serbonian bog; the hoarse Trinacrian shore; his sail-broad vans; quencht in a boggy Syrtis; when Argo pass'd Through Bosporus betwixt the justling rocks.

(*a*) Describe Satan's shield and spear.

(*b*) Relate the building of Pandemonium.

(*c*) Give an outline of the Second book of Paradise Lost from the opening of Hell-gate to Satan's arrival at the throne of Chaos.

12. Explain the following: *sublimed with mineral fury; the mind is its own place; Orion armed; since created man; descent and fall to us is adverse the parching air burns frore: the buxom air.*

GENERAL HISTORY. (Optional.)

(*Primers of Greece and Rome*, and Collier's *Great Events.*)

Monday, June 11th:—Morning, 9 to 12.

Examiners, ... { Chas. E. Moyse, B.A. / Revd. Prof. Scarth, M.A. / Revd. C. P. Read, M.A. / Revd. J. Williamson.

1. (*a*) Give an account of the Homeric Poems.

(*b*) What picture do they give of early life in Greece?

2. Name, in due order, the great battles of the Persian War.

3. Give the causes, and results to Athens, of the Peloponnesian War.

4. Alexander the Great: (*a*) his character and aims; (*b*) his conquests.

5. What were the causes of the struggle in Rome between the Patricians and Plebeians; and how was it ended?

6. Give a short account, with dates, of the battles of the *Allia*, *Cannae*, *Zama*.

Compare the extent of the Roman Dominion at the close of the Punic Wars with that at the establishment of the Republic.

8. (*a*) What changes were made by Julius Cæsar in the government at Rome?

(*b*) What was the ambition of his life?

(*c*) How did it result in his death?

9. What causes brought about the fall of the Western Roman Empire, and what nations arose from its ruins?

10. (*a*) What great waves of settlers have passed over Europe?

(*b*) Illustrate, by reference to some particular nation, the fusion of various races that has taken place within it.

11. Give a short account of the Massacre of St. Bartholomew and the Edict of Nantes, with dates.

12. What events, giving dates, are associated with the names *Mohammed*, *Charles Martel*, *Peter the Hermit*, *Luther*, *the Duke of Alva*.

GEOGRAPHY. (Optional.)

Tuesday, June 12th:—2 to 5 p.m.

Examiners,..... .... { Chas. E. Moyse, B.A. / Rev. J. Williamson / Rev. Prof. Scarth, M.A. / Rev. C. P. Read, M.A.

1. What do you mean by:—bar, lagoon, dune, reef, polder, strata, steppes, isothermal lines, ecliptic, zodiac?

2. Account for the fact that islands generally occur in groups.

3. What are the causes of tides, dew, seasons, climate?

4. Describe accurately but shortly the continent of Africa, both with regard to its physical features and its political divisions.

5. Give a short account of the inhabitants of the East Indian Archipelago.

6. Where are Leghorn, Canton, Comorin, Manilla, Kerguelen's Land, Socotra? and for what are they noticeable?

7. What towns are upon the Equator?

8. Which do you consider the most important rivers in the world, and why?

9. How are the different States of South America governed?

10. Give the principal foreign possessions of Holland and Portugal, with their respective products?

11. Over what towns, rivers, etc., would a bird pass, flying in a direct line from Moscow to Madrid?

12. What are the chief products of Australia and Tasmania? By what people are they mostly consumed?

13. Have any planets moons besides our own? If so, which?

BOTANY.

FRIDAY, JUNE 8TH, 1883:—9 A.M. TO 12.

Examiner,.....J. W. DAWSON, LL.D.

1. Explain the germination of a seed.

2. Describe the Root-stock, Bulb and Tuber.

3. Explain the structure and use of the leaf.

4. What are the parts of the Exogenous stem.

5. Describe the parts of an ordinary flower, and state some of their modifications in other flowers.

6. Give examples of some of the kinds of fruits with their names.

7. Define Species, Genus, Order and Class and give examples.

8. State what you know of the mode of nutrition of plants.

9. State some of the distinctive characters of any Canadian plant, and its place in the classification.

10. Describe the flower exhibited, stating its parts and mode of inflorescence. *

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* The Examiner will please supply the candidates with specimens of any ordinary flower.

ELEMENTARY CHEMISTRY.

THURSDAY, JUNE 7TH :—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. Distinguish between atomic and molecular weights, and give the atomic weights of any six of the elements.

2. Give the chemical formulæ of Nitric Acid, Potassic Chlorate, Ammonia, Olefiant Gas, and Calcic Carbonate.

3. Describe any method for determining the relative proportions of Oxygen and Nitrogen in air.

4. Distinguish (*a*) between acids and anhydrides, (*b*) between efflorescent and deliquescent salts.

5. Give the properties of Carbon Dioxide, and state how it may be shown to contain Carbon.

6. Give the names and formulæ of the Nitrogen Oxides, and describe one member of the series.

7. What is double decomposition? Illustrate by an equation.

8. Manganese Dioxide and Hydrochloric Acid are heated together. Name and describe the gas which is given off.

9. Describe the preparation of Phosphuretted Hydrogen.

10. Give the laws of definite and multiple proportion.

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